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PHYSICAL TRAINING FOR BOYS



by
M. N. Bunker

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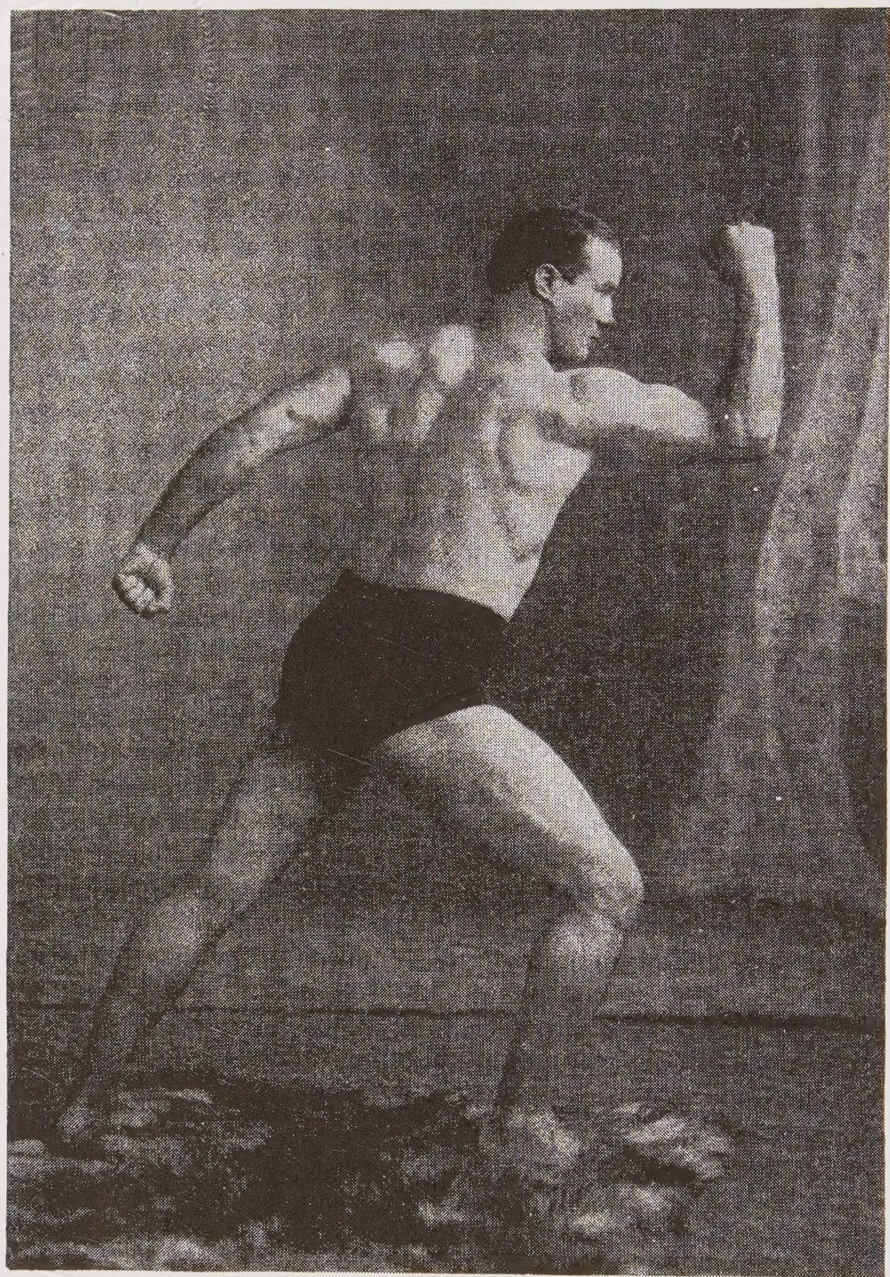
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JOHN ROWETT,
TWENTIETH-CENTURY APOLLO.

PHYSICAL TRAINING FOR BOYS

BY

M. N. BUNKER, D.C., M. PED.

*ILLUSTRATED WITH THIRTY-SIX EXERCISE POSES FROM
PHOTOGRAPHS, AND FROM OTHER PHOTOGRAPHS
SHOWING REMARKABLE PHYSICAL
DEVELOPMENT IN YOUTH*



BOSTON
LOTHROP, LEE & SHEPARD CO.

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Physical Training for Boys

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PREFACE

IN order to build and develop a strong, healthy body as a foundation for powerful and self-reliant manhood, it is but reasonable that a boy should begin very early in life to strive toward a physical ideal. Such an ideal should represent not only physical perfection but also the possibilities which the body itself affords for self-improvement. Both of these truths have been held constantly in mind in the preparation of the exercises and instructions presented in the following pages; an arrangement which makes them available to the single boy, working alone and without

PREFACE

apparatus but impelled by admiration and appreciation of physical beauty and skill, and also to groups of boys working together toward physical perfection.

My deepest appreciation is due my grandmother, Mrs. Bathsheba Newman, for the high ideals inculcated during my early boyhood, and also to Harry Lening, Archie Gillespie, Edwin Russell, Harry Paschall, and Robert B. Snyder, Jr., for their hearty coöperation in arranging the illustrations.

If the boys of to-day, inspired by the accomplishments of these, their fellows, equal any standards which may have come down as a heritage from previous ages, my reward will indeed be sufficient.

THE AUTHOR.

CONTENTS

I.	ANCIENT IDEALS . . .	13
II.	A BOY AND HIS BODY . .	20
III.	POWERFUL LUNGS, AND THEIR DEVELOPMENT . . .	26
IV.	YOUR SHOULDERS AND ARMS .	41
V.	YOUR CENTER OF STRENGTH .	58
VI.	BUILDING INTERNAL STRENGTH	71
VII.	THE FOOD YOU EAT . . .	82
VIII.	THE HIPS	90
IX.	STRENGTHENING THE BODY SUP- PORTS	106
X.	THE FEET, AND THEIR CARE .	118
XI.	SLEEPING, BATHING, AND GROW- ING	123
XII.	BUILDING BY BATHING . . .	129
XIII.	YOUR WEIGHT AND MEASURE- MENTS	136
XIV.	WORK AND PLAY	146

ILLUSTRATIONS

[In addition to thirty-six full-page half-tones from photographs of athletes showing proper manner of taking specified forms of exercise.]

John Rowett: Twentieth-Century

Apollo (Page 168) *Frontispiece*

FACING PAGE

Paul Maass	150✓
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PHYSICAL TRAINING FOR BOYS

CHAPTER I

ANCIENT IDEALS

THE ancients considered the human body the most wonderful creation known on earth. The boys of Rome who lived hundreds and hundreds of years ago were taught that they should train and develop their bodies ; they were expected to spend some time each day in the great gymnasiums, and to practise diligently the exercises which they learned, so that they could have perfect bodies. They studied the different drills and learned which kind of ex-

PHYSICAL TRAINING FOR BOYS

ercise was the most beneficial, just as the boys in this Twentieth Century master their spelling and arithmetic lessons. They did this because the people at that time believed, and rightly, too, that if the body were not given care and were not trained and improved, the mind would not be as active as if the body were kept healthy and clean.

As soon as the boys became proficient in the gymnasium, they were given the opportunity to participate in the great Olympic games which occurred every four years. There were contests in boxing, wrestling, foot-racing, and all other athletic sports, in each of which those boys who had gained strength and skill were allowed to engage. These contests lasted for several days,

and the winners were crowned with wreaths of sacred olive leaves, and were borne on the shoulders of their friends through the streets of the city, in much the same way that the successful athlete of the present is carried by his admirers. Their names were recorded among those who had done some great thing for their country; poets praised the athletes in verse, and sculptors made statues of them, showing their physical perfection; and these statues were placed in all the great cities throughout the country. The government specially honored each of the winners in the different sports, because it was believed that their development and skill were pleasing to the imaginary gods whom the people worshipped. These gods were thought to

PHYSICAL TRAINING FOR BOYS

represent the different kinds of physical perfection, and were supposed to favor those who gained physical power and beauty.

There were a great many of these gods that were worshipped because of their physical loveliness, but two of them may well be studied by the boy of to-day who wishes to develop his muscles and have a strong body. These are Hercules and Apollo.

Hercules was short in stature, with a small head resting on a thick, short neck. He was massively built, and every movement of his body indicated strength and power. It is said that he lived out-of-doors, and, although so wonderfully strong, was always ready to undertake anything which would increase his muscular ability. He was

ANCIENT IDEALS

of a kindly disposition, and ever ready to lend his great strength to aid those who needed help.

Differing in all physical characteristics from Hercules, his brother, Apollo, was the deity that the Roman youth were taught to adore and accept as their ideal. The beautifully rounded muscles of Apollo were what those boys longed to equal, and what caused them to give their best efforts to making their own bodies perfect. Well might they take Apollo as their model, for statues made to represent him show that he was beautiful in every way. Quick and supple, rather than slow and cumbersome in movement, and with grace and beauty in every line of his frame, he stood for the highest achievement in physical development.

PHYSICAL TRAINING FOR BOYS

He was taller and more slender than Hercules, with a face and head indicating the highest degree of intelligence. Besides being a god of physical beauty, Apollo was said to be proficient in music and all other arts, and was believed to favor those who developed their minds as well as their muscles.

Both of these gods originated in the minds of the earliest civilized people, who, in their daily fight with the wild things of nature, came to worship strength and the power to overcome in physical combat. As time passed, agility, massive power, endurance, beauty, and suppleness came to be embodied in imaginary beings whom the people worshipped, and in this way the love and adoration of physical strength was handed down from earliest man as a

ANCIENT IDEALS

heritage to the boys of Rome and Greece, in the personalities of Apollo and Hercules.

And so, though these boys are spoken of as the ones who first tried to make their bodies perfect, the real love of strength which inspires every true boy is one that existed long, long before the boys of Rome were striving to attain the flawless beauty and the enduring strength of Apollo.

CHAPTER II

A BOY AND HIS BODY

EVERY true boy desires to make the most that he can of his body ; he wants a clear brain, strong lungs, and muscles that he may use in the hardest kind of exercise without fatigue. Never have the opportunities for developing such a body been greater than they are to-day.

When the Roman boys were learning to train their muscles the people did not know as much about the different parts of the body and their workings as they do now, and so the young students were compelled to practise many exercises which were not especially

helpful. All this, however, has been changed for the boy of the Twentieth Century. When he wishes to develop and improve his chest muscles, all he has to do is to select certain exercises which affect those muscles, and then to practise them vigorously until the muscles have become as large and strong as he wants them. In the same way he can select other exercises which benefit other parts of the body, and by spending only a few minutes each day in practice, may develop his body just as thoroughly as did the first boy athletes who were striving for perfection.

Those boys who were trained in the gymnasiums of Greece and Rome grew to be perfect physical men ; and besides this, their minds were equally strong and capable of performing great

PHYSICAL TRAINING FOR BOYS

tasks. They became the greatest poets, the most wonderful painters, and the best architects that have ever lived. They were able to do this because when they were young they developed strong bodies so that they could have great minds.

Everything that they accomplished may be equalled by the boys of to-day if they will do their best to make every part of their own bodies as nearly perfect as possible. It is not necessary that they go to some gymnasium or that they have a great deal of apparatus in order to do this. A boy's body is so arranged that he can develop and strengthen every part of it with exercises which he may perform in his own room, and without any apparatus other than that which is provided by the

A BOY AND HIS BODY

muscles themselves. The structure of the human framework is so planned that certain muscles do certain kinds of work, and other muscles do exactly the opposite, and when these muscles are caused to work against each other, both sets will be made more efficient. It is such drills as these that any boy may practise, and if he will do the work with energy and a determination to succeed, he may acquire as beautiful a form and have as much strength as he would have if he followed the old Roman custom of gymnastic training.

Although machinery of any sort is not necessary in building strong muscles or in making the body symmetrically beautiful, there may be some boys who will want to use a few pieces of apparatus in their practice bouts. A

PHYSICAL TRAINING FOR BOYS

punching-bag, with light dumb-bells and Indian clubs are all beneficial to some extent, but even these should be used for only a few minutes each day. It is important that a boy be very careful about undertaking such work, for his body may be easily injured while he is growing. And if he does hurt himself in any way during the time when his bones and muscular tissues are forming, it may take years and years to overcome the effects.

Just as satisfactory results may be obtained by following the exercises which are presented in the following chapters. These drills may be performed by any boy in his own room, and if every stroke is made with force, the muscles will soon show a decided improvement in both strength and

A BOY AND HIS BODY

form. A little rivalry will add greatly to the enjoyment of the work, and if two or three boy friends can arrange to do their exercises together, each striving to surpass the others, they will find the practice period one of the pleasantest parts of the day.

But no matter what the circumstances or conditions under which a boy may work, if he will study his body and learn what it needs, and then practise energetically, he will be able to achieve strong and beautiful muscles and the symmetrical lines of Apollo. With such a physical foundation he may attain the highest honors in every great mental and physical undertaking. The entire world is open to him—the physically trained American boy.

CHAPTER III

POWERFUL LUNGS AND THEIR DEVELOPMENT

THROW back your shoulders, head erect, and take a deep breath. How the blood rushes through the veins, and every part of the body tingles with life! This is the result of having a great lung capacity. And that is exactly what every boy needs. He should have it, because on the amount of pure air which he takes into his body depends largely whether he will be strong or weak; and he must have well-developed lungs if he is to have the finely formed chest which is necessary in making his body

POWERFUL LUNGS

symmetrical. When the chest is hollow and sunken, the whole body looks weak, while a broad, well-muscled chest is a sure sign of physical and mental power.

The building of powerful lungs is not a difficult task ; it is merely giving the cells which compose the lung tissues all of the work that they can do, and, as they grow stronger and larger, increasing their duties. There are thousands of these little air-chambers, and when a breath is taken into the body, these cells expand until they are full. If a great deal of air is taken in at one time, all the lung cells are filled, and it is such breathing which furnishes the exercise that causes them to grow.

In appearance, the lungs resemble a

PHYSICAL TRAINING FOR BOYS

pair of sponges, one on the right side and one on the left side of the body, just below the collar-bone. Below them is a very powerful muscle called the diaphragm, and at the sides, and back, and in front they are protected by the ribs. There are twelve pairs of these slender bones attached in the back to the backbone, while in front some of them are fastened to the breastbone and others are held in place by muscles. There are muscles between the other ribs also, and it is these muscles which raise the ribs when the lungs are expanded in breathing. The more air that is taken into the body in each breath, the farther the lung tissues will expand and push out the ribs, making the chest broader and larger.

POWERFUL LUNGS

Now if a boy takes only a little air into his lungs there will be no work for a great many of the air-chambers, and after a while they will become useless, just as an arm would lose its strength if it were tied to the body where it could not be exercised. But if all the little air-cells are filled with air every time a breath is taken they will grow and become stronger, just as the arm develops when it is exercised. And there is a very special reason why a boy should have big, powerful lungs. There are a great many little veins running through the lung cells, and these little veins bring the blood from all parts of the body to be purified in the lungs by the air. When the lungs are small and cramped, they will not hold enough air to purify all this

PHYSICAL TRAINING FOR BOYS

blood, and so a part of the impure or dirty blood has to go back over the body without being cleansed. When it has to do this, the whole body suffers for lack of the new food which should have been brought by the blood from the lungs. The muscles cannot be developed when they are not properly fed, and the whole body will become weak because the lungs have not done their work as they should.

Because of this, every boy should give first attention to developing a large lung capacity, and to gaining a full, broad chest. This will be easy for him to do, because he can practise taking deep breaths at almost any time, and after a few weeks it will become a habit to breathe deeply all the time. Any

POWERFUL LUNGS

boy can increase his chest measure several inches in a few months by doing this, and by practising a few simple exercises that will affect the muscles of the chest. At the same time he will be assisting all the other parts of his body to keep in the best of condition. His brain will be clearer, and all his organs will perform their work as they should, because they will be supplied with the blood which has been purified in the lungs.

Any exercise which will make a boy breathe deeply and cause him to use his chest muscles vigorously will be beneficial, but the work supplied in these drills will be especially helpful in increasing the size and endurance of his lungs, and in making his chest broad and beautiful.

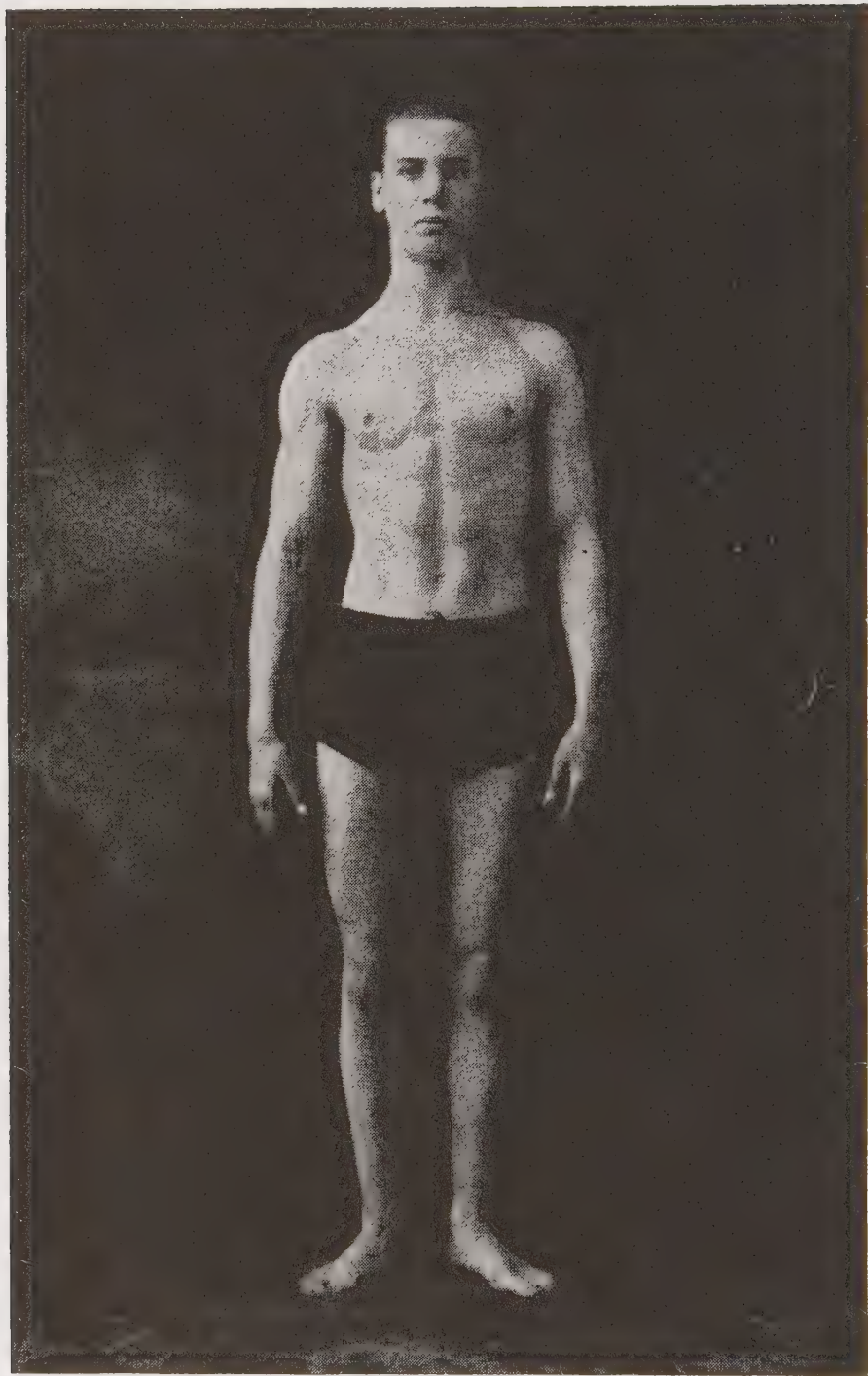


FIGURE 1.

POWERFUL LUNGS

Exercise 1

Stand erect with feet close together and arms hanging loosely by sides (Fig. 1). Raise the arms slowly, inhaling at the same time, until the arms are level with the shoulder (Fig 2). Hold in this position while counting 1-2-3-4-5; then gradually lower the arms to first position while exhaling. Do not count aloud, but think the numbers.

Exercise 2

Instead of lowering the arms as in the previous exercise, keep on raising them until they are straight up from the shoulders and every part of the lungs is filled with air (Fig. 3). Retain the air in the lungs while lowering the arms to the sides. Hold this way for a moment, and then slowly exhale.



FIGURE 2.



FIGURE 3.

PHYSICAL TRAINING FOR BOYS

This may be found rather difficult at first, and if so, it should not be repeated more than two or three times.

Exercise 3

Hook the first finger of the left hand into the first finger of the right (Fig. 4). Slowly push the hands out from the chest, all the time trying hard to pull the hands apart. Continue until the arms are almost straight (Fig. 5). This drill may be varied and made more difficult by assuming a squatting position, at the same time balancing the body on the toes. Other fingers may be used also as a change.

Exercise 4

Draw the shoulders as far downward and forward as possible. After they

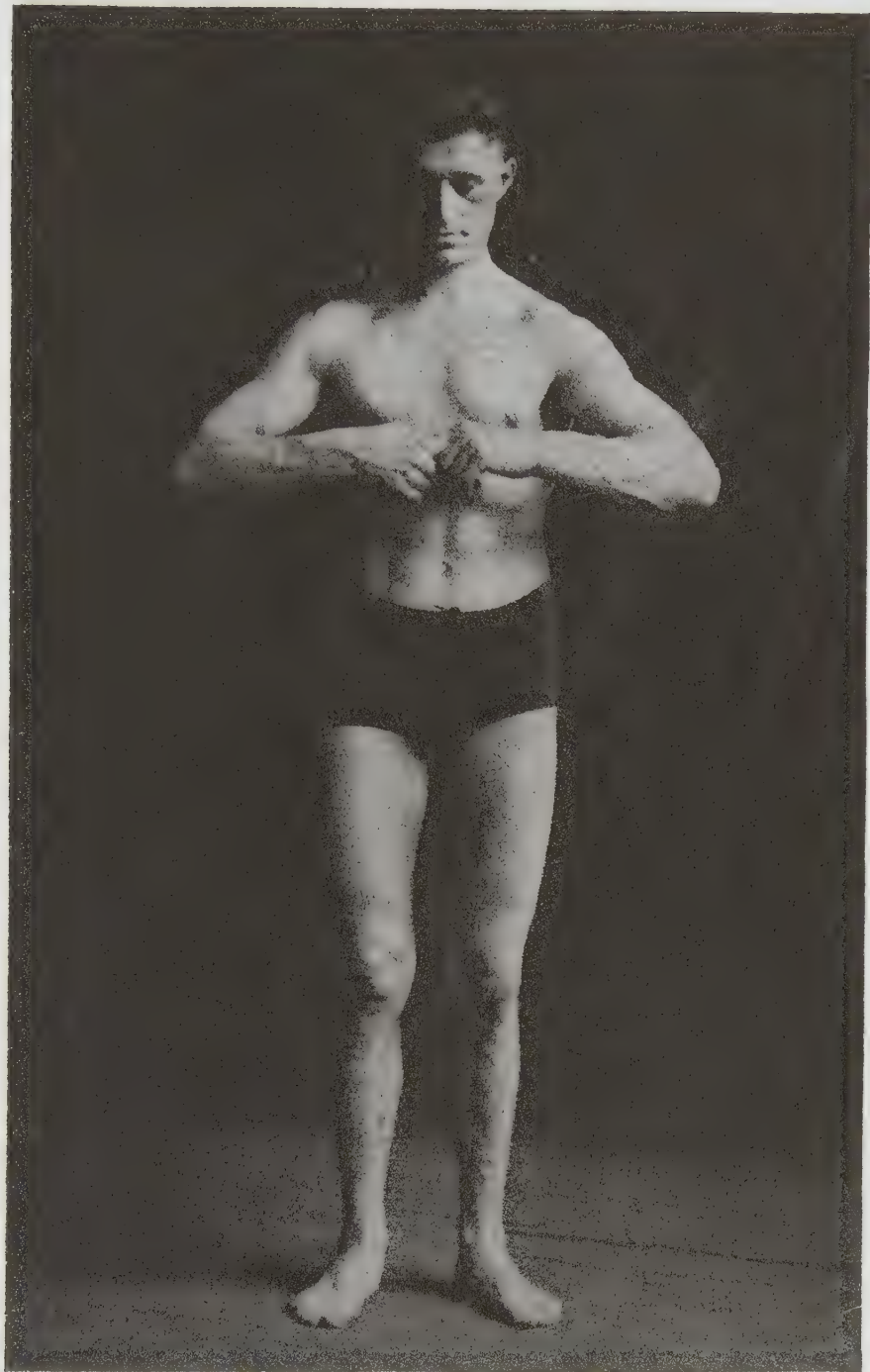


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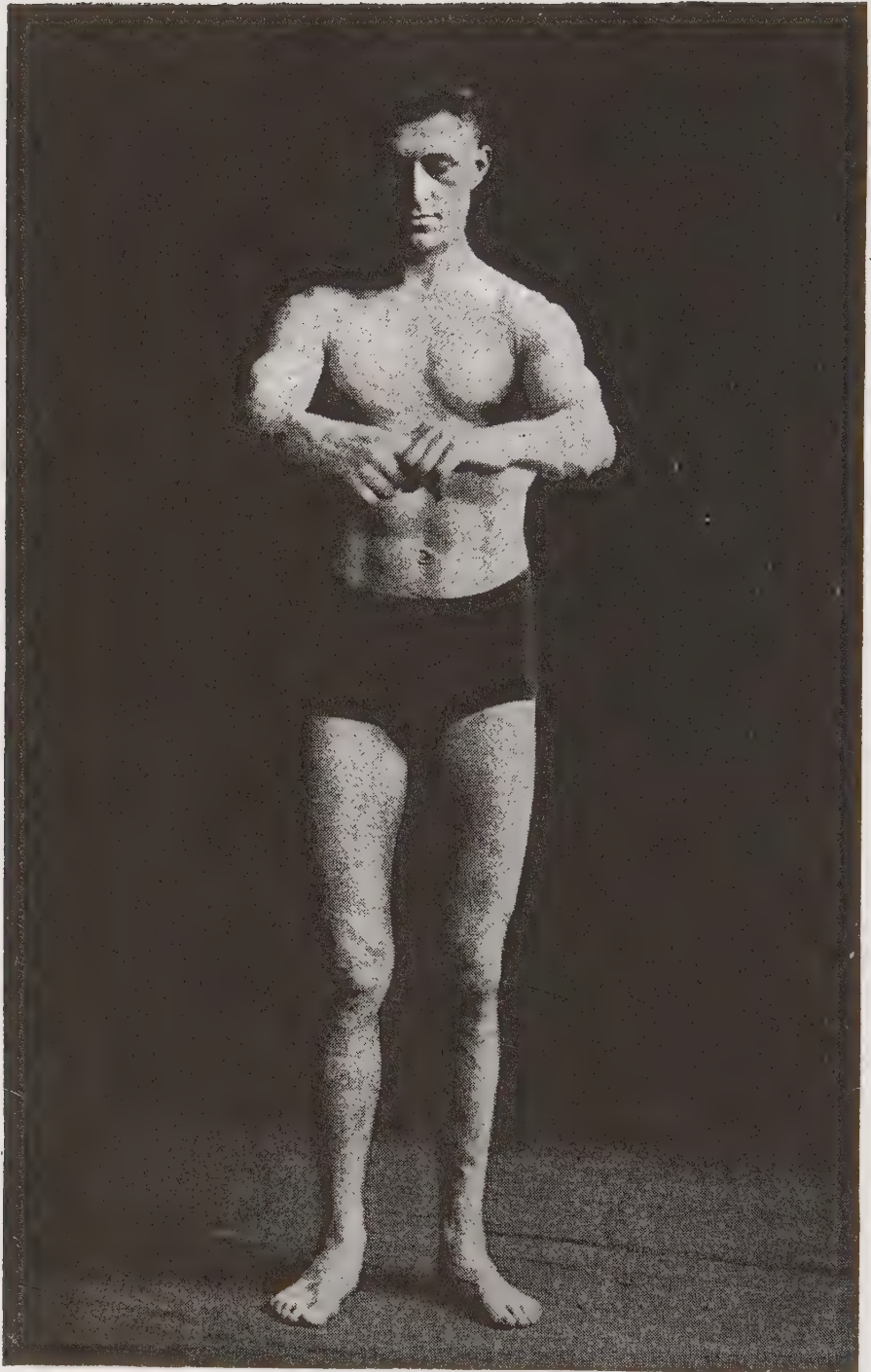


FIGURE 5.

POWERFUL LUNGS

are as far as they will come, make another effort to force them still farther forward and downward (Fig. 6). This drill exercises all the chest muscles, and should be much practised by every boy with round shoulders.

All these exercises should be done with energy. They should be repeated until the body becomes somewhat tired, but not exhausted. A few minutes each day should be devoted to performing them, and if this is done, a great deal of improvement will soon be noticed.

There should be one invariable rule regarding clothing: It should be loose enough to permit the lower part of the body, as well as the chest, to expand freely. This is absolutely essential in acquiring correct habits in breathing.

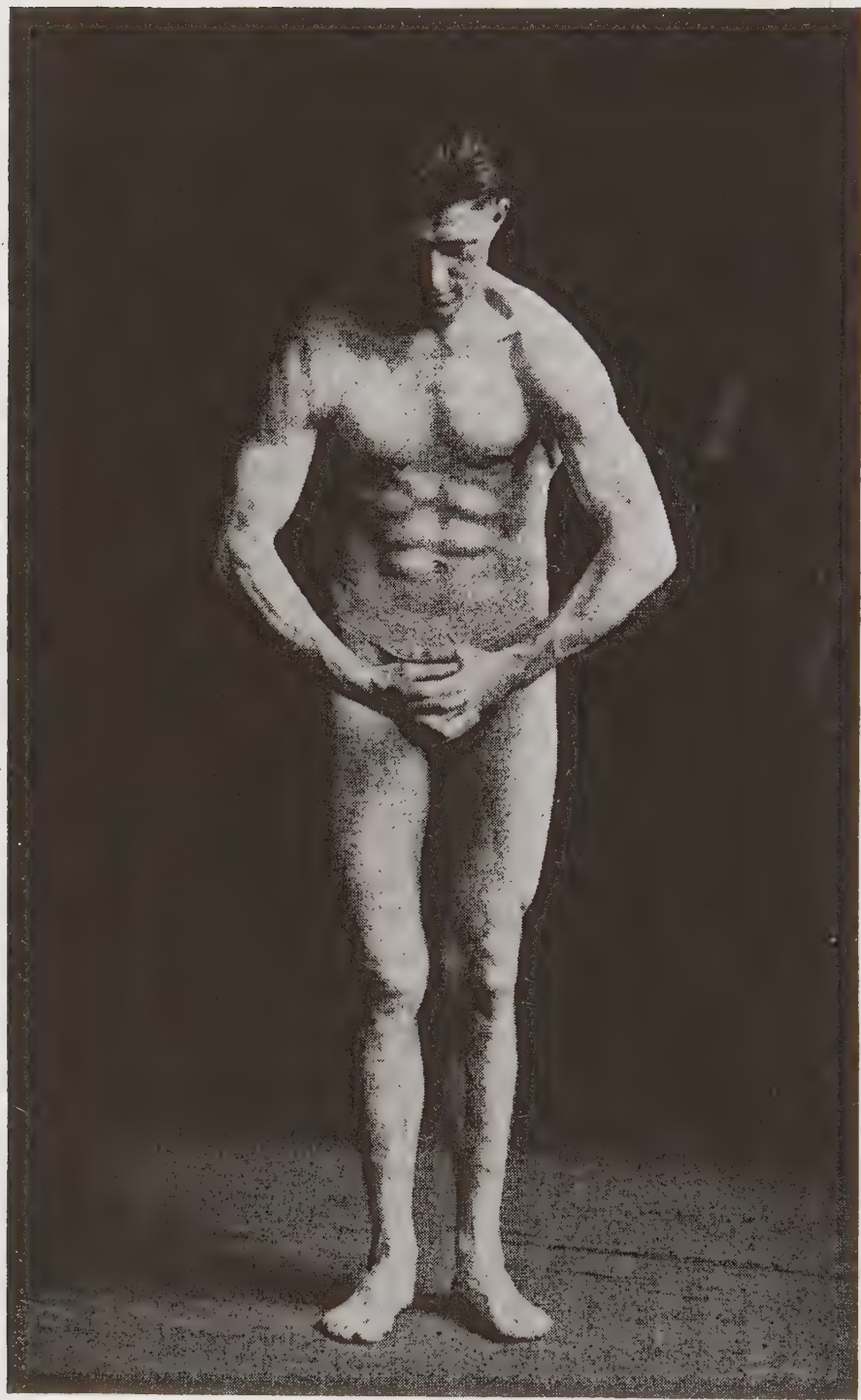


FIGURE 6.

CHAPTER IV

YOUR SHOULDERS AND ARMS

SEVERAL years ago a boy neighbor of mine was telling me how strong he was growing to be ; and the first thing that he did was to roll up his sleeve, and press his fist up to his shoulder that I might feel how large and firm his muscles were. And this is a good way for any boy to feel ; he should work to have well-developed arms and shoulders, so that he may be able to use them a great deal without becoming fatigued. All through the hundreds of years since first man lived in caves, strong arms and shoulders have been symbols of bodily effi-

PHYSICAL TRAINING FOR BOYS

ciency ; and when these muscles are well-developed their perfect lines add greatly to the beauty of the entire body.

As the foundation for the muscles of the shoulder there are two bones—the scapula and the clavicle, or as they are more commonly known, the shoulder-blade and the collar-bone. The shoulder-blade is the flat, triangular bone which may be felt at the back of the shoulder. It is held in place by a number of different muscles which are attached to it, and by the clavicle. This is a long slender bone which extends from the upper part of the breastbone to where it joins the scapula in forming a hollow socket or cup. Any boy can easily learn the shape and position of this

YOUR SHOULDERS AND ARMS

bone in his own body and he will see that if it is not well covered by a firm coating of muscular tissue, that it may be easily injured in a fall or by being struck a hard blow. But nature has amply provided for this protection by covering the entire shoulder with one great muscle. This muscle is brought into play in every movement of the arm that is outward or upward, and when well developed it gives the shoulder the beautifully rounded curves which a boy should strive to possess.

If it were not for the shallow cup formed where the two shoulder-bones join, a boy would not be able to throw a ball nor swim, nor make any one of hundreds of movements that he can make with his arm. As it is, he may

PHYSICAL TRAINING FOR BOYS

do all these things because this bony socket allows the rounded head of the upper arm-bone to move in almost any direction without difficulty. From this ball-and-socket joint at the shoulder, the long slender humerus or upper arm-bone extends to the elbow, where it is fastened in a hinge joint.

When a boy brings his fist up to his shoulder he will find a swelling of muscle about half-way from the shoulder to the elbow, on the front of his arm. This is the biceps muscle, which covers all the front part of the humerus, and that draws the lower arm and hand toward the shoulder. When the arm is in this position, it is straightened or extended by another great muscle called the triceps, which is found on the back of the arm. These two mus-

YOUR SHOULDERS AND ARMS

cles work in opposition to one another and so any exercise that furnishes work for one will benefit the other.

In the lower or forearm there are two bones; the ulna is the longer and is on the side of the arm that the little finger is on, while the radius is the one which may be felt on the side toward the thumb. This bone gets its name because it radiates or moves around the ulna in turning the hand. It, like the ulna, is fastened at the elbow to the humerus to form a hinge joint. There are a great many different muscles located in the lower arm, but they have long and difficult names, and it is sufficient to know that some of them are used in turning the hand, others in moving the arm upward and downward, and still others in gripping,

PHYSICAL TRAINING FOR BOYS

lifting, and pulling. All these lower arm muscles are connected with the wrist while some extend into the hand controlling the action of the fingers. For this reason, any exercise that will benefit the lower arm will also serve to develop and strengthen the wrist and hand. And it is very necessary that they be strong, for a boy's arm is no stronger than its weakest part; and in the same way, if the muscles in his hands are not firm and strong, it will lessen the usefulness of the entire arm.

It is not very difficult to find exercises that will employ all the shoulder and arm muscles, but it will mean hard and regular work to give them the strength and form of perfection. But the boy who will give this attention to these muscles will find that the time

YOUR SHOULDERS AND ARMS

has been well spent ; he will be able to row a boat or throw a ball, or do any kind of arm work without becoming tired or spraining a wrist or shoulder.

There are other exercises than those given here, but these will bring all the different muscles into play and after a boy has practised them until he has learned their effect, he will be able to originate others which will help him to acquire powerful and beautiful arms and shoulders.

Exercise 5

Assume an erect position with feet close together. Tense the muscles of the back and shoulders, and raise the half-doubled arms from the body (Fig. 7). Resisting all the time with the back muscles, raise the fists up to the forehead (Fig. 8). Hold a second,



FIGURE 7.

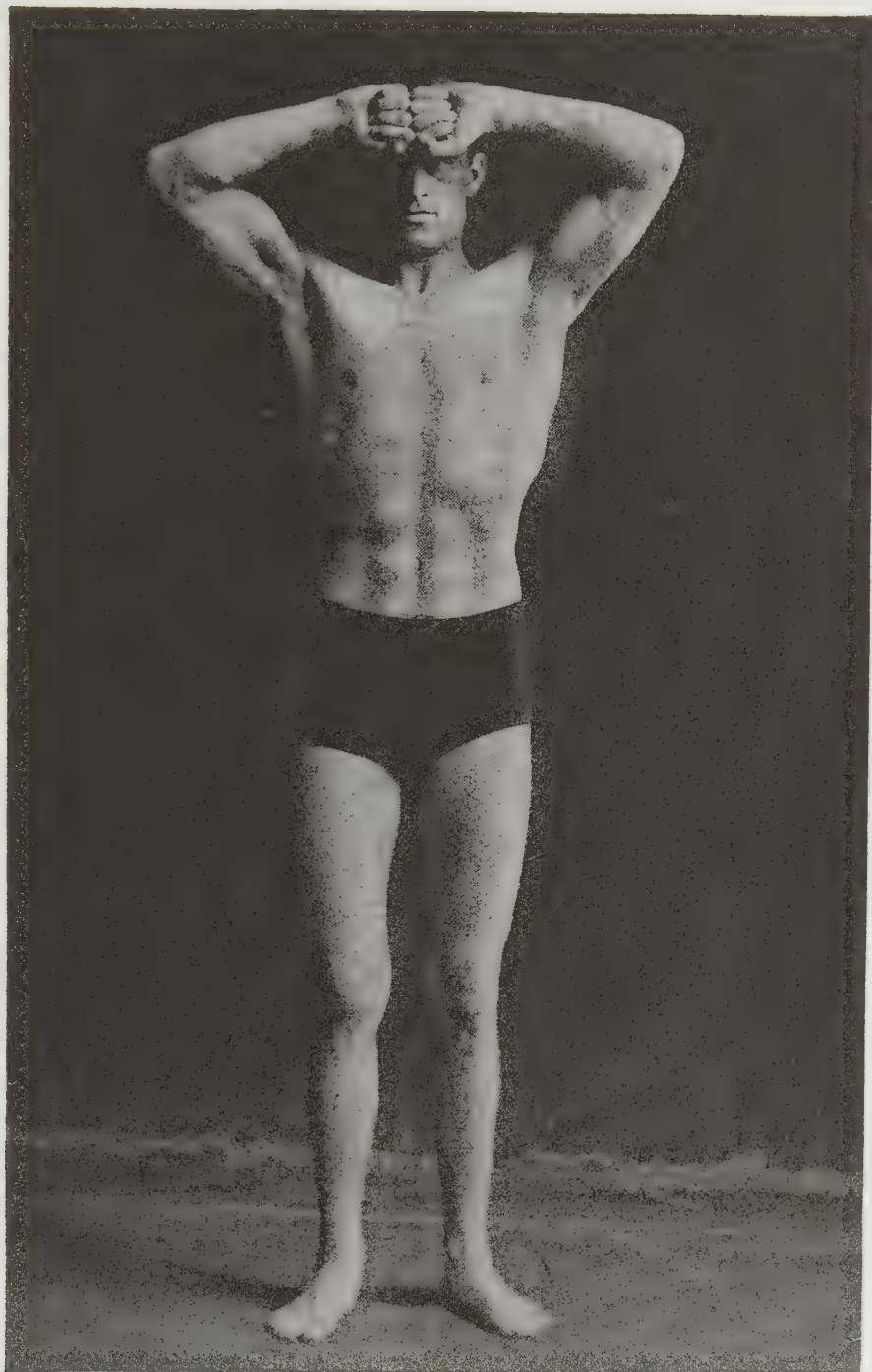


FIGURE 8.

PHYSICAL TRAINING FOR BOYS

and then force back to first position. If properly done this will soon tire the shoulder muscles, and a change may be made by raising the arms directly up from the first position, the upper shoulder muscles resisting the upward movement.

Exercise 6

Hook the third fingers together, directly in front of the breastbone (Fig. 9); tense the muscles of the arm, and resisting with the left, pull the right arm around until it is straight out from the side (Fig. 10). Hold while counting five, and reverse to normal or first position. Now move the left arm out, resisting with the right. Be sure that both arms are kept tensed, and use all of the power possible in the movements. Vary by changing the fingers

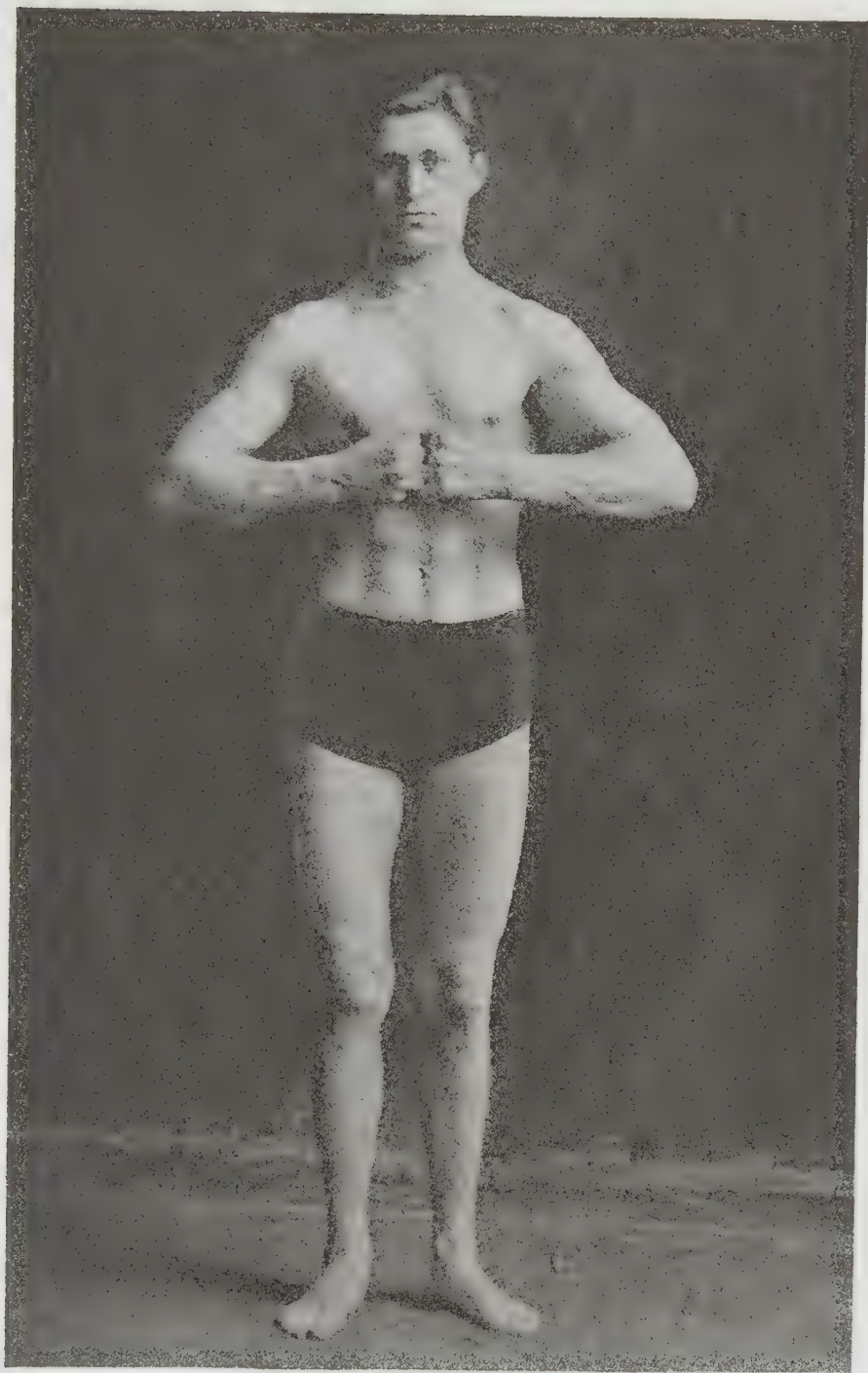


FIGURE 9.

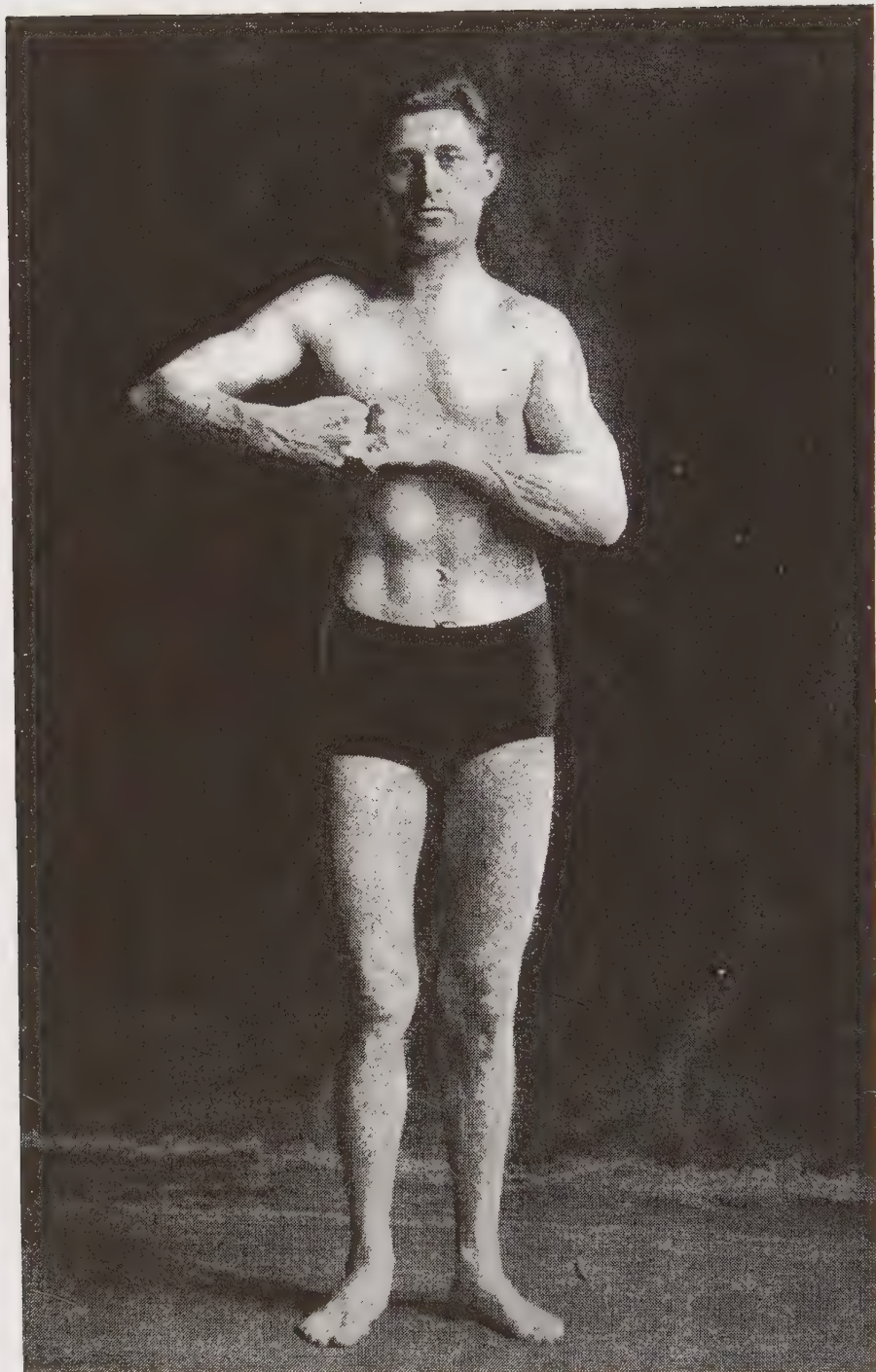


FIGURE 10.

YOUR SHOULDERS AND ARMS

used. Beneficial to all the arm muscles and to the fingers.

Exercise 7

Erect and with shoulders back, clasp the left hand with the right as shown (Fig. 11). Grip as tightly as possible and resisting with the left hand push the right hand in toward the body (Fig. 12). Repeat until tired and change to the left side. This is excellent for the forearm and wrist muscles.

Exercise 8

Clasp the left hand in the right, directly in front of the chest. Now with the right hand push the left hand out to full arm's length (Fig. 13), resisting determinedly all the time with the muscles of the left arm. Continue until tired, and then change by using the



FIGURE 11.

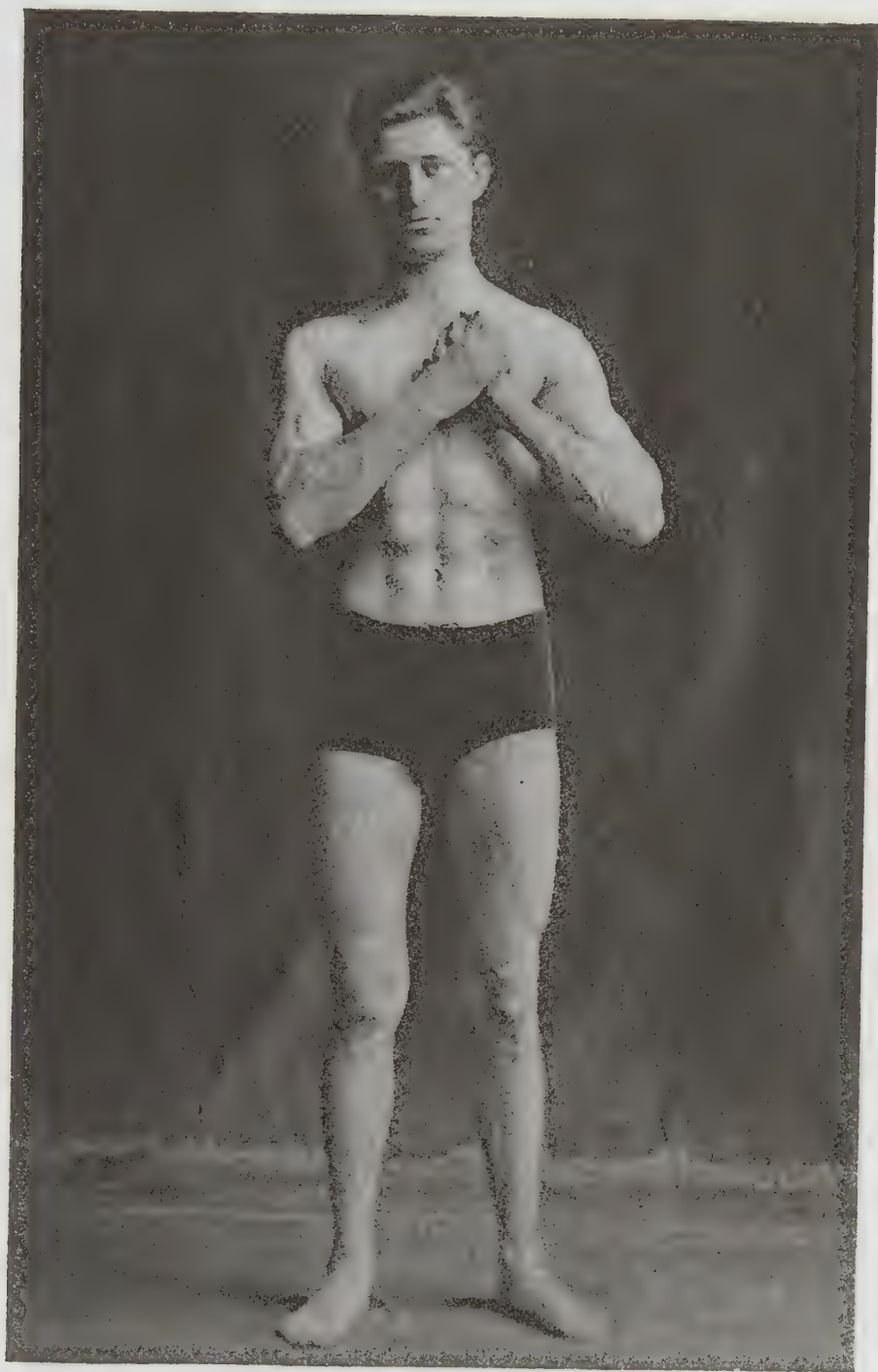


FIGURE 12.



FIGURE 13.

YOUR SHOULDERS AND ARMS

left hand to push the right one. This exercise affects all the muscles of the arm, hand, and shoulder.

Always breathe deeply while performing these exercises, as well as at all other times. Have plenty of fresh air, doing your practice in the open if possible. If this cannot be, do the next best thing—have the windows open wide.

CHAPTER V

YOUR CENTER OF STRENGTH

LIKE to swim and climb! What boy does not? And this is the very thing that goes to make the back broad and strong and beautiful. Every great athlete has had such a back, and every boy should have it because the back is the center of the whole muscular system. It is in the back that a boy should be strongest because all the muscles of the legs and shoulders depend on it for help in performing their work. Even the muscles of the chest are made stronger when those that cover the back are developed.

Besides this the condition of the back

YOUR CENTER OF STRENGTH

has a great deal to do with the appearance of the body. When the muscles are firm and smooth, they add greatly to the beauty of the whole form, while when they are weak and poorly developed, the entire body lacks graceful lines, even though the rest of the muscular system is perfectly developed.

In the very center of the back, extending from the base of the skull to the hip-bones, is the backbone. This is the most peculiar structure in the whole body. Instead of being one long bone, it is built up of twenty-four little, irregular bones joined together by little cushions of cartilage. If these little cushions were not there, it would be impossible for a boy to walk or run or jump without breaking the bones; and it would be the same way if there were

PHYSICAL TRAINING FOR BOYS

just one long bone. But as it is he may bend forward or backward or from side to side, and may twist and turn in almost any way with perfect ease. This is because these little cushions are so pliable that they absorb all the shock that would come to the bones in each movement.

Fastened to the backbone are the ribs which give shape to the back. And over this framework there are situated a great many muscles, one of which is of special interest. It has been called the "climber's muscle," because it is used most in climbing. The boy who swims also gives this muscle a great deal of work, and will soon have it as well developed as his friend who climbs trees and fences. But if he does both of these things, he will be giving it just

YOUR CENTER OF STRENGTH

what is needed to make it firm and strong. It covers the entire back from the armpits to the hips and may be easily felt with the fingers when the back is tensed.

There are two other muscles which a boy may easily locate with his fingers when the shoulders have been pushed back. Of course he cannot feel these in his own back, but may easily find them in the back of some boy friend. When they are tensed and forced into view they form two ridges lying close together between the shoulder-blades.

These muscles are brought into use in backward movements of the head and shoulders. Rowing and steady pulling, as in a tug-of-war, furnish most excellent employment for them, and

PHYSICAL TRAINING FOR BOYS

they will soon show a great improvement in form as well as being stronger and more enduring, if such sports are practised regularly. Unless his back is very poorly developed indeed, a boy can usually locate these two upper muscles, and will be able to watch their progress from the very first. If he will do this, he will soon find that there is no greater game than that of body building for giving keenest enjoyment coupled with beneficial results.

Here are some exercises which are easily performed and which will make this great game more interesting each day, while at the same time helping a boy to build these muscles along with those of other parts of his body. In this way he will come to have an even development in all parts, and this will

mean that he is gaining a perfect physical structure.

Exercise 9

Bend the body forward and clasp one leg just back of the knee (Fig. 14). Resisting with the leg muscles, slowly assume an erect position (Fig. 15) with the leg straight in front of the body. Hold for a second, and return to position. The resistance of the leg should be gradually increased in order to secure the best results. **This benefits the whole back, but especially the lower part.** A variation may be made by using the other leg, or by placing the hands above the knee.

Exercise 10

Lie flat on the floor, face downward, and with the fingers interlaced back



FIGURE 14.

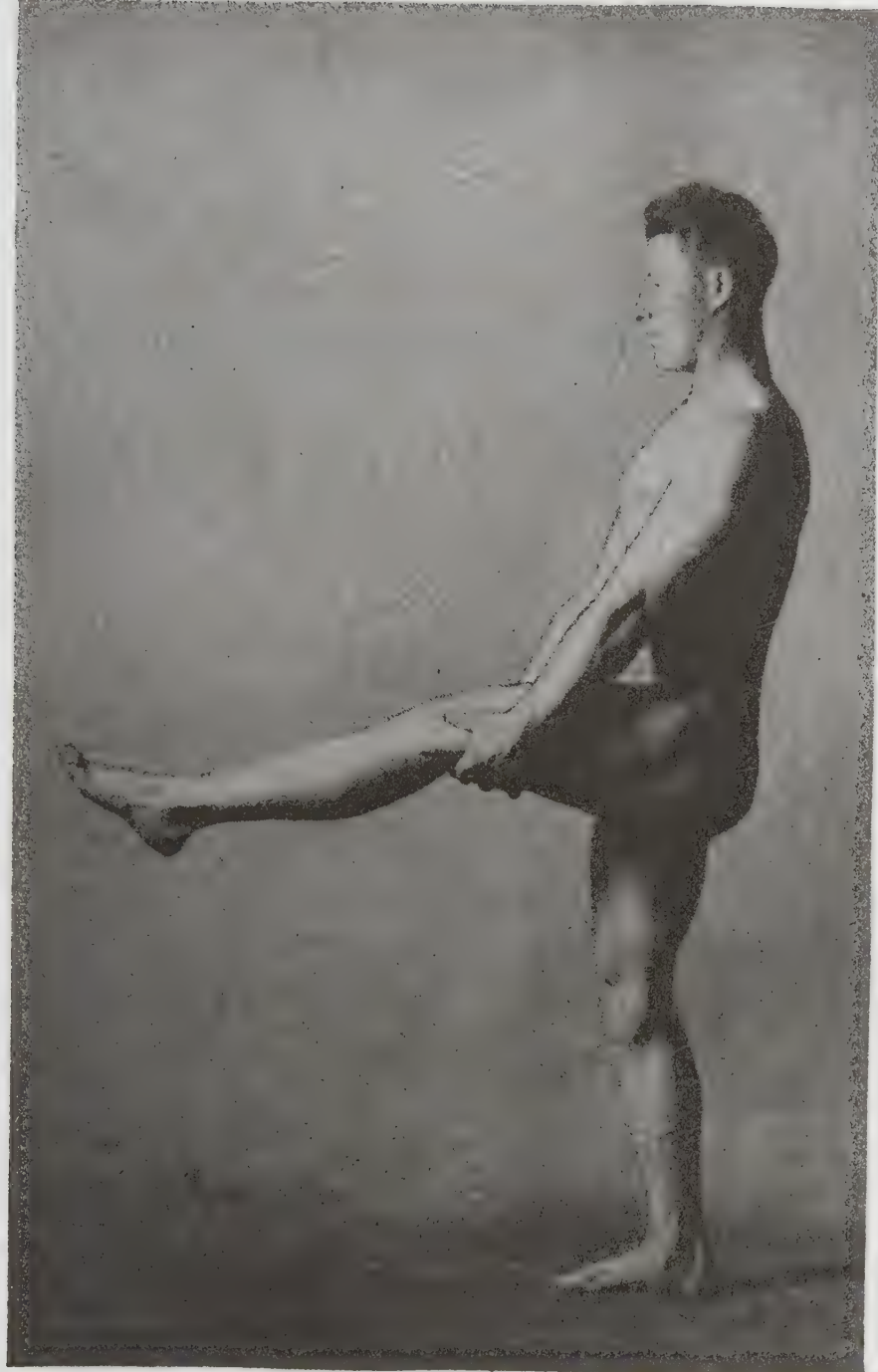


FIGURE 15.

PHYSICAL TRAINING FOR BOYS

of the head (Fig. 16). Keeping the shoulders and legs rigid slowly raise the feet and head from the floor (Fig. 17). This will bring all the back muscles into action and should be repeated until they are tired.

Exercise 11

Standing erect, place the hands on the legs just below the hips (Fig. 18). Tense the back and force the shoulders backward (Fig. 19). This is very good for the muscles just below the shoulders and also for the arms.

Remember to have plenty of fresh air while exercising and to breathe deeply then as at other times. This will help to send fresh blood to the muscles so that they may benefit by the exercises.



FIGURE 18.



FIGURE 19.

CHAPTER VI

BUILDING INTERNAL STRENGTH

ALL the muscles which a boy has are not on the outside of his body where he can see their movements; some of the most powerful are hidden away inside the bony frame where they perform their work day after day, involuntarily, without a thought or effort on the part of their owner. One of the most important of these is the stomach. A great many boys do not know that this is a muscle, but it is, and may be developed just like the muscles of the arms and legs. It should be, too, for it has a great deal of work to

PHYSICAL TRAINING FOR BOYS

do ; all the food which is carried over the body by the blood, and that is used in building up the muscles, has been through the stomach. It was there churned back and forth until it was broken up into tiny particles that could be absorbed by the blood and carried to the tissues of the body

If a boy could see his own stomach he would find that it is a long-shaped muscular sack, larger at one end than the other, and situated on the left side of the body just back of the lower ribs. At the larger end it is connected with the mouth by a long tube, while at the smaller part there is an opening through which the digested food passes into another long tube. There are two little valves, one at each of these openings, which close, keeping the food in

BUILDING INTERNAL STRENGTH

the stomach until it has been acted upon by the different juices which are made in its lining. This is a soft, moist tissue which covers all the inner surface of the stomach. When the stomach is full of food, this coating fits smoothly but when it is empty, the tissue is thrown into little folds. All over this lining there are little openings through which a watery substance is poured into the stomach to be mixed with the food. This juice is manufactured by little glands which are located in the walls of the stomach. Besides this, there are several other juices, each of which aids in the process of digestion.

But these juices must be mixed with the food before they can change it so that it may be used in building new bone and muscle. This is accom-

PHYSICAL TRAINING FOR BOYS

plished by the action of the muscles of the walls of the stomach. There are three coats of these muscles and each one has an important part to perform. The outer coat is a protective tissue and saves the second layer from injury. This second wall of tissue is made up of three different sets of muscles; one extending between the two openings of the stomach; another all around it from end to end; and the other following no direct course. As soon as food enters the stomach, each of these muscles begins expanding and contracting. This movement agitates or churns the food until it has become soft and mushy and the different digestive juices have become thoroughly mixed with it. A part of this is immediately absorbed by the blood

BUILDING INTERNAL STRENGTH

while the remainder passes from the stomach into the intestines where the process of digestion is completed.

Now it is very plain that if these muscular walls of the stomach should fail to act, the work of digesting the food would be impossible and there would be nothing with which to build better muscles; and in the same way, if the glands in the walls of the stomach should be destroyed or injured, no matter how much the muscles of the stomach might work, the food would remain unchanged and useless to the body. For this reason every boy will understand just how necessary it is that he have a powerful stomach if he is to build up the other parts of his muscular system, and is to have good health.

PHYSICAL TRAINING FOR BOYS

Even though it is on the inside of his body where he cannot see its development, a boy may give his stomach exercise just as he does any of his other muscles. This may be done by exercising the muscles which are on the outside of his body over the stomach. The boys who wrestle do this in the very best way, but excellent results may be gained by practising the drills given herewith, for a few minutes each day.

Exercise 12

Lie flat on the back on the floor. Keeping the body rigid, raise the feet and legs straight up, and backward until the toes touch the floor (Fig. 20). Hold for a moment and then resume first position. Those boys who are in

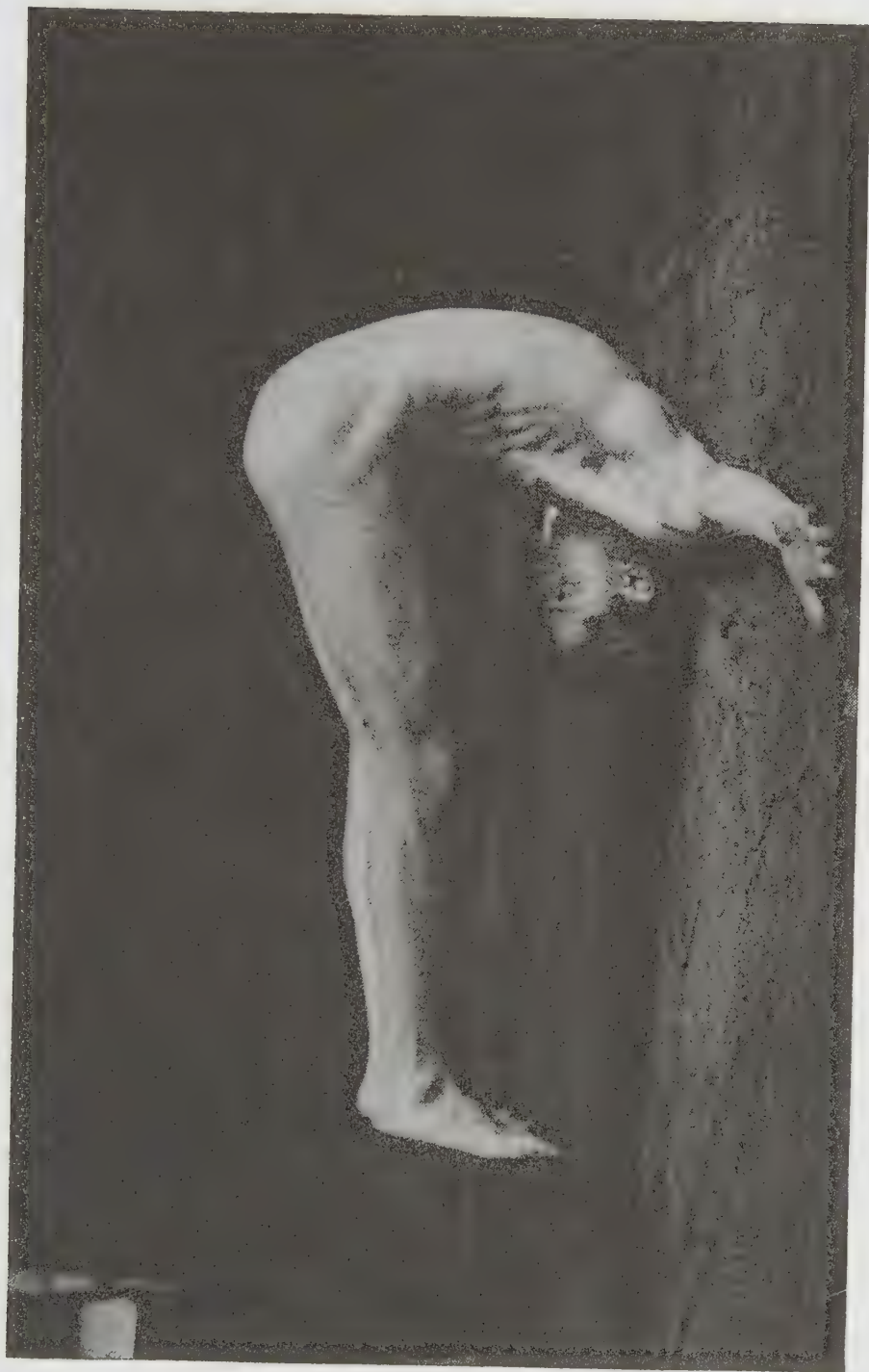


FIGURE 20.

PHYSICAL TRAINING FOR BOYS

the habit of turning somersaults will find this easy to do, and it is a splendid way of exercising the stomach. It may be practised on the playground, out-of-doors, or inside, and is interesting as well as beneficial. It should be repeated until the muscles become somewhat tired.

Exercise 13

Stand erect with the hands straight in front of the body (Fig. 21). Swing the arms and body to the right (Fig. 22); hold for a second and then swing back to first position, and then to the left. Like the previous exercise, this may be used at almost any time, and gives work to all the muscles about the waist line.

Breathe DEEPLY all the time; exer-

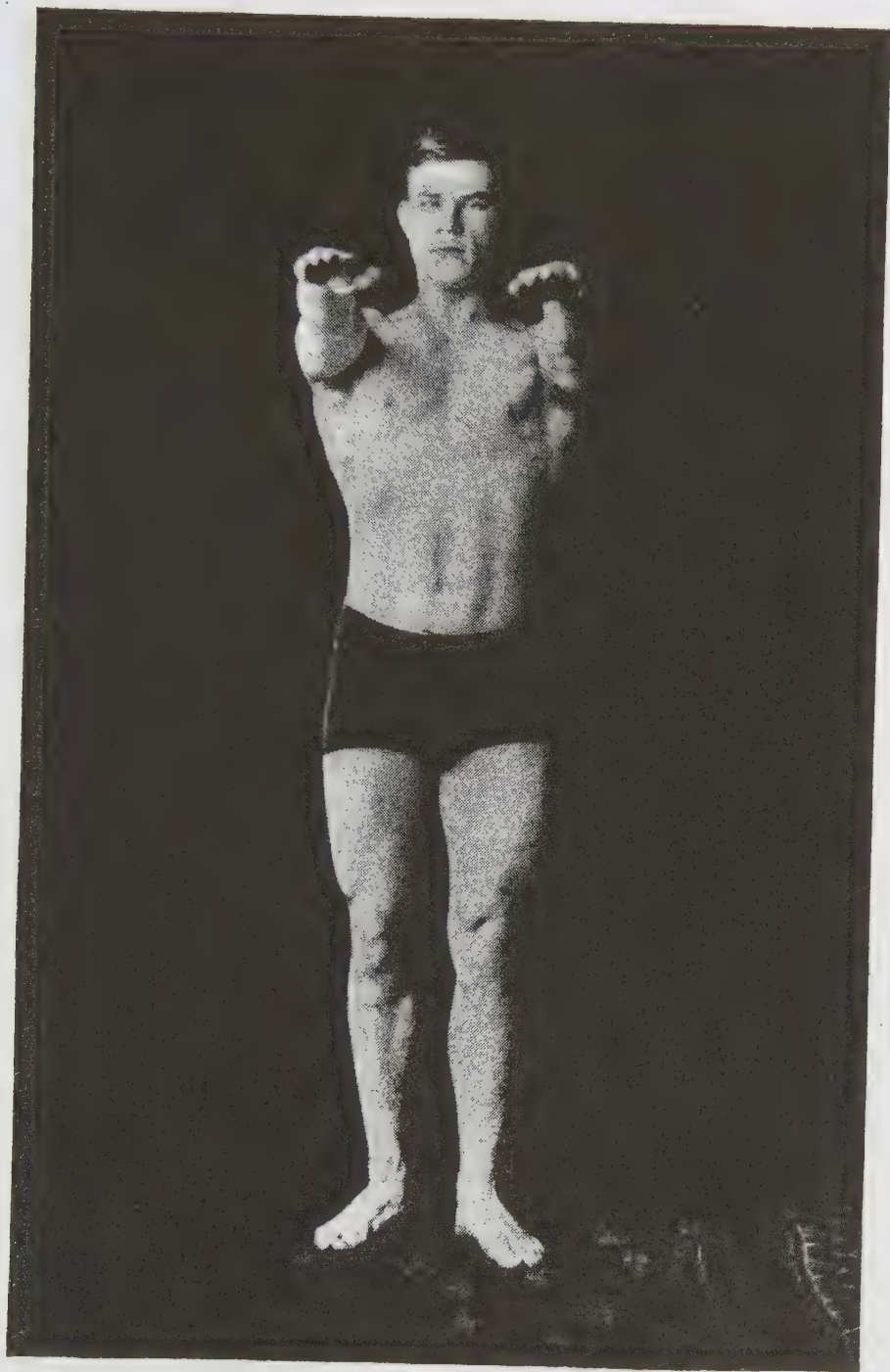


FIGURE 21.



FIGURE 22.

BUILDING INTERNAL STRENGTH

cise and study the body—this will mean a perfect physical boyhood, from which every boy will grow into a fine, powerful man.

CHAPTER VII

THE FOOD YOU EAT

A LONG time ago a great philosopher said, "Tell me what you eat and I will tell you what you are." By this he meant that the body was influenced by the foods which were used in building it; that if the diet was mostly of muscle-forming foods, the body would be muscular, and that the brain was increased by eating other kinds of foods. So, to be strong in both brain and muscle, every boy should supply his stomach with both kinds of food.

There are a great many of these foods, but two of the best are milk

THE FOOD YOU EAT

and eggs. These are both rich in the elements which build all parts of the body. Those boys who have lived on a farm, or have seen cows and chickens know that the tiny chick has only the food in the egg until it is strong enough to break a hole in the shell, and that the little calf lives on milk for many weeks. And these two foods are just as good for a growing boy as they are for the chicken or the calf. They are both rich in strength-building elements, and so not as much of either is required for a meal as would be necessary of many others. A couple of eggs well beaten, with a little sugar and a glass of milk added, are sufficient to nourish the body for several hours, and may be considered almost equal to a heavy dinner of other foods.

PHYSICAL TRAINING FOR BOYS

Fruit and vegetables should also form a large part of a boy's food, and though it is customary to cook vegetables, a great many are excellent when eaten raw. Fruit may always be used in the raw state, but of course should be washed free from dust and dirt.

A great many boys who are strong and healthy do not eat meat, while many others use only a little of it. It is not necessary, either, for whole-wheat bread and corn bread furnish the same elements that are gained from meat, and they do not clog the system with as much waste matter as meat leaves.

Beans, peas, and lentils are also rich in muscle-building qualities, and the boy who eats these vegetables fre-

THE FOOD YOU EAT

quently may be sure that he is giving his system the food that it needs. Cabbage, lettuce, and such vegetables do not possess the muscle-building value of these more starchy foods, but they do contain certain elements which are needed in maintaining health and keeping the entire system in the best condition.

Graham bread should be used much more than it is; indeed, to build lasting strength, both in muscle and brain, graham should be a regular item of diet.

A great many boys do not like oatmeal or rolled oats. This is usually due to their improper preparation, for when thoroughly cooked they are not only nourishing but palatable.

However, it is not only important

PHYSICAL TRAINING FOR BOYS

that a boy be careful about what he eats, but he should be equally so regarding when and how he eats it. The stomach needs rest just the same as anything does, so a boy should eat his meals at certain times each day. If he does this, the stomach will have the digestive juices all ready to begin work when the food is taken into the body. But if he eats between meals his stomach does not have this rest and cannot do its work as it should. It is very important, too, that he masticate every mouthful until it is thoroughly mixed with the saliva in the mouth before swallowing.

Some boys want to drink tea and coffee, but those who wish to become strong will not, because both of these drinks are hurtful to a boy's system ;

THE FOOD YOU EAT

he may not feel it at first, but after a while he is sure to be weakened if he drinks them. They contain no food and cannot help him to become healthy, but even if they did not contain anything poisonous, their use would merely mean additional labor for the stomach, while no part of the body would be benefited in any way. Milk and cocoa are good food-drinks, but neither these nor water should be used to wash the food into the stomach. Water should be used only to quench thirst.

Those boys who live in cold climates need foods rich in heat-producing qualities, while those in warm climates merely need the things which will give them strength. Such foods as beans and potatoes will furnish the first of

PHYSICAL TRAINING FOR BOYS

these, while a more general diet, including fruit and vegetables, is suitable for the latter.

Rich foods, pastries, and candies are rarely eaten by the successful boy athlete, any more than by the man who has made a record in athletics. It is true that all these things have some value, but in most instances they are indigestible, and serve to overload and overwork the digestive system. Again, the lad who wins in physical or mental effort does not gorge his stomach but quits eating so that he may have an appetite for the next meal when it is served. He makes this a rule simply because he knows that too much work will ruin his internal muscular system just as continued hard usage will injure his muscles in arms, legs, or back.

THE FOOD YOU EAT

And these are the methods which will enable all boys to keep the stomach, and also the entire body, in the very best of condition.

CHAPTER VIII

THE HIPS

AFTER a boy has developed his chest and arm muscles, and has built up a powerful back, it may seem that it is unnecessary to do anything with the hips. But these muscles have a very important part in the muscular system. If a boy did not have hip muscles he would not be able to stand erect, nor to make any one of the hundreds of movements that he can make with his legs. It would be impossible for him to jump, or to run, or even to walk. He could not box, nor wrestle, nor row a boat, nor take part in any of the games which he likes.

THE HIPS

The very first boy athletes who lived hundreds of years ago were taught that well-developed hips made them stronger and more manly; and as strength and manliness are the qualities which every boy should strive to possess, the hips and their development will be very interesting.

The foundation for the hip muscles is two bones, one in each hip. They are large and irregular in shape, and, with a little bone which is wedged in between them at the back, they form a basin-like structure, which protects all the different lower organs of the body from any injury. It is over these bones that the muscles of a boy's hips work. There are nine of them on each hip, but only one is of special interest. This is the outside muscle which covers the

PHYSICAL TRAINING FOR BOYS

entire surface of the hip ; and any kind of exercise that makes it firmer and stronger serves to develop all the muscles under and around it, so it is this muscle which should be watched in building the hips.

When this great outside muscle is well developed a boy can easily find it in his own body and feel its action with his fingers. Stand erect, with the heel upon a table or the back of a chair, and with the leg extended. Tense the hips, and raise and lower the body slowly. While doing this, the workings of the muscle may be easily felt by passing the hand over the hip.

In much the same way that the hips protect the internal muscles at the back, there is another important set of muscles which form a wall around

THE HIPS

them in the front. These muscles do not have any bony support but extend from side to side. They are called abdominal muscles because they cover the cavity in which the intestines, stomach, and other organs are located, and which is known as the abdomen. Because they have to protect these very important organs, it is especially necessary that the abdominal muscles be very strong and well developed. In addition to this, when a boy strengthens these outside muscles he is also giving exercise to all the organs which they cover, so all that he does to make these muscles firmer serves a double purpose.

A great deal of care should be taken in developing the abdominal muscles to train them but not to strain them ;

PHYSICAL TRAINING FOR BOYS

there is a great difference in the results, for the boy who trains his muscles is building his body and making it more beautiful, while the one who strains them is doing the very opposite. This is true of other parts of the body as well as the muscles of the abdomen, and the safest way to avoid injuring any of the delicate tissues is to perform each exercise for only a few minutes at a time until the tissues have gained the strength to endure hard work.

Both of these great groups of muscles should be well developed in a boy's body if he is to have a symmetrical form. Such development may be gained in only a few months by practising these exercises, which furnish the very work that they need.

THE HIPS

Exercise 14

Extend the body, with the feet upon a stool or bench, and the upper part supported by the left arm (Fig. 23). Lower the hips as much as possible, keeping the arm straight (Fig. 24). Then raise the hips slowly, forcing them upward as far as they will go. This exercise will soon tire the muscles and may be varied by using the right arm as a support; and by using both arms, and resting the hips on the floor in a sitting posture, raising the entire body upward and then lowering it.

Exercise 15

Balance the body on the left leg; raise the right foot backward and upward until it is straight out behind (Fig. 25). Then swing it forward to the same position in front of the body



FIGURE 23.

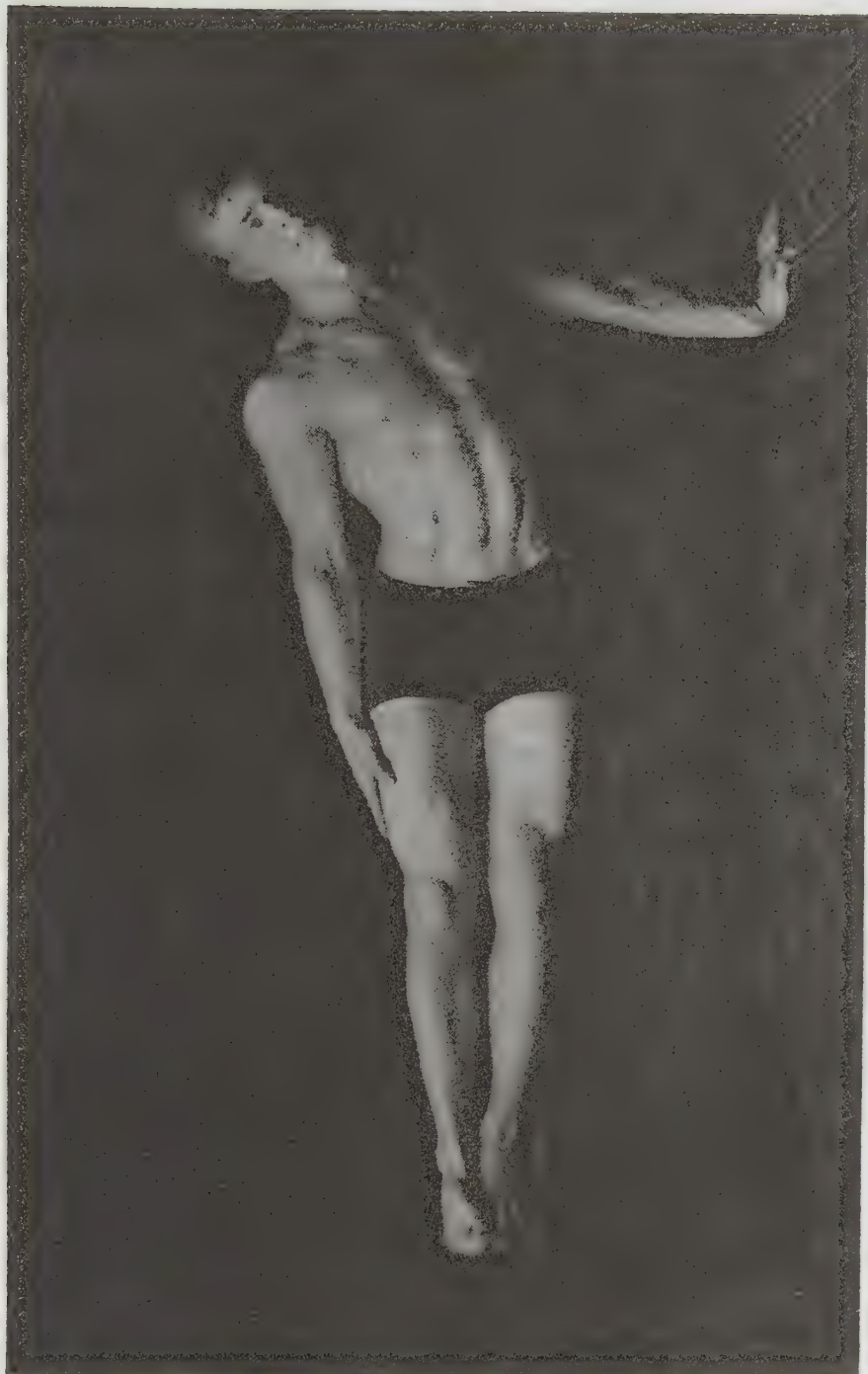


FIGURE 24.



FIGURE 25.

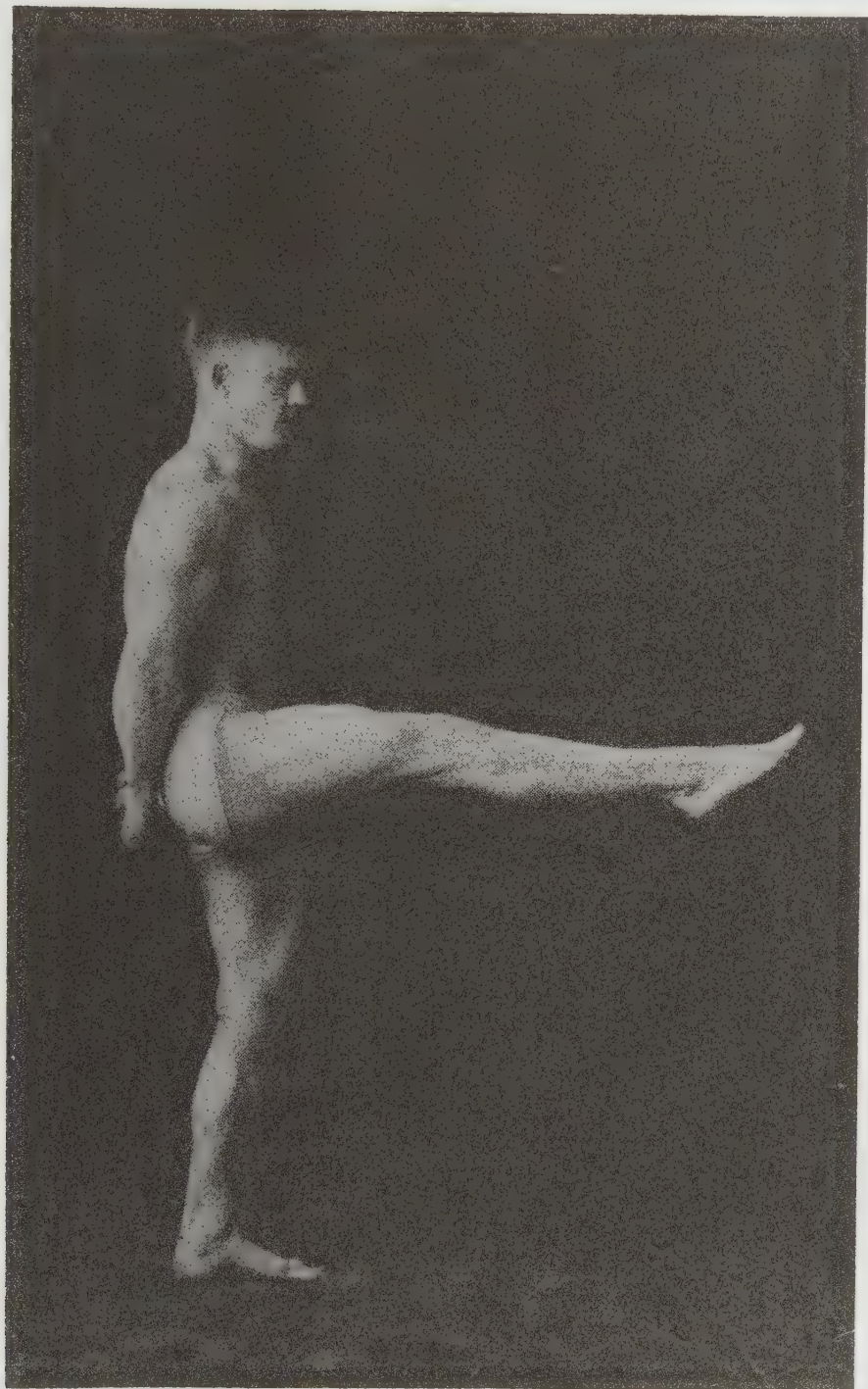


FIGURE 26.

PHYSICAL TRAINING FOR BOYS

(Fig. 26). Repeat until the hip muscles are tired and then change to the other leg.

Exercise 16

Lie flat on the back on the floor, with the legs extended and the arms resting by the sides (Fig. 27). Tense the legs, keeping them straight, and raise the body straight up from the floor until a sitting posture is reached (Fig. 28). Then slowly resume the first position. This is excellent for the muscles of the abdomen if not continued after they begin to tire.

Exercise 17

Stand with feet close together, and arms raised straight above the head. Swing the arms and body forward (Fig. 29) and then backward (Fig. 30). This is a splendid exercise for the

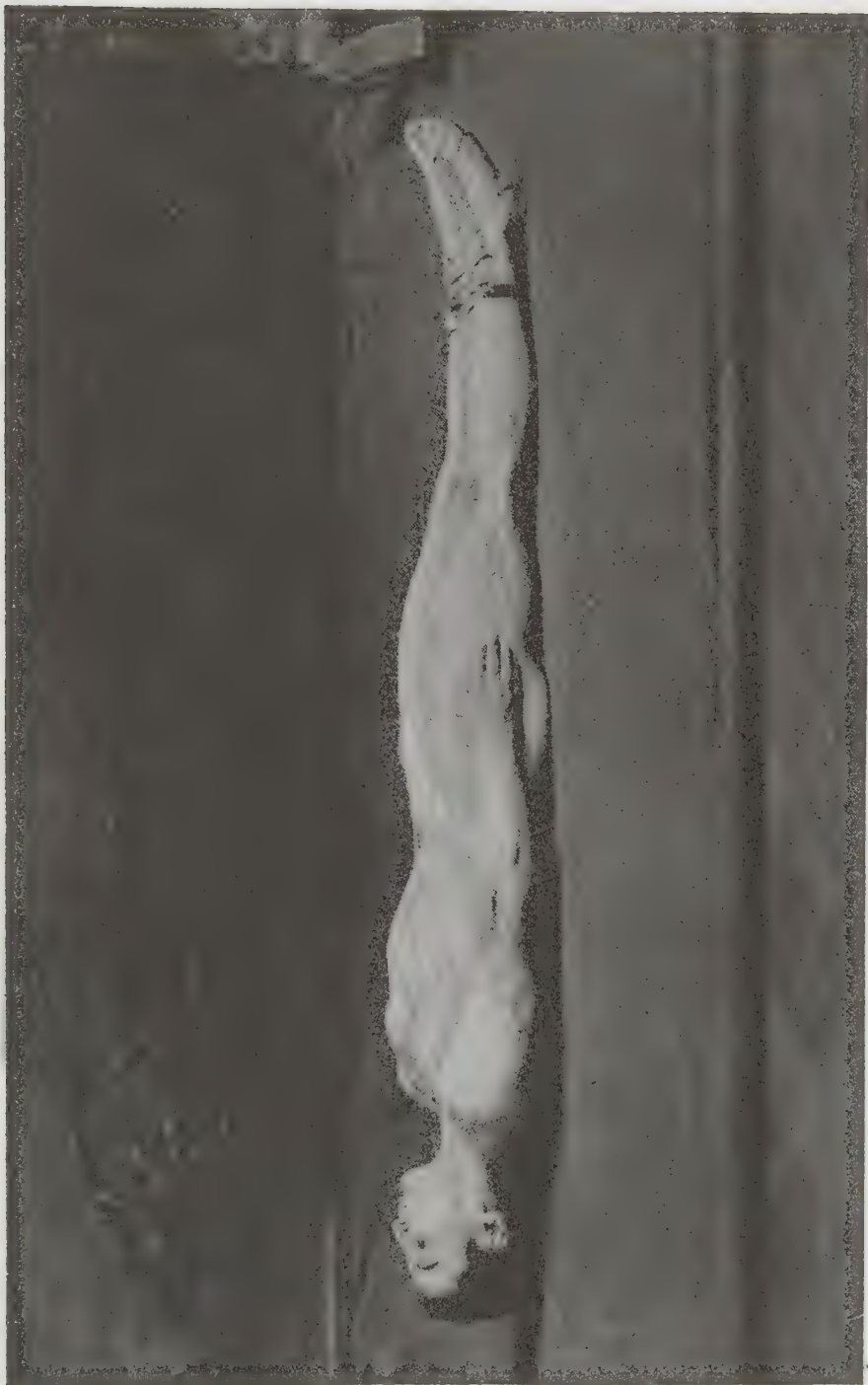


FIGURE 27.

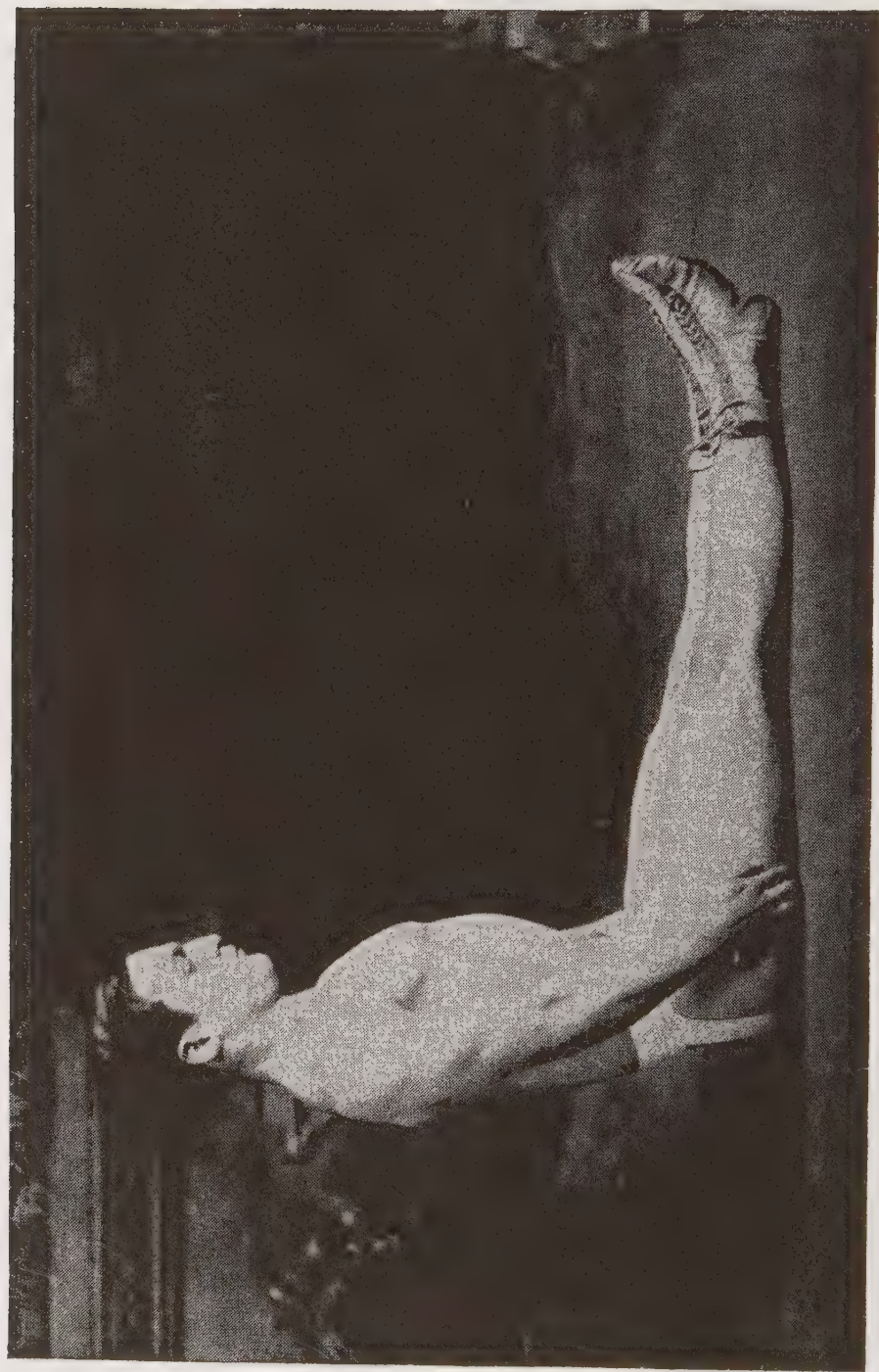


FIGURE 28.



FIGURE 29.

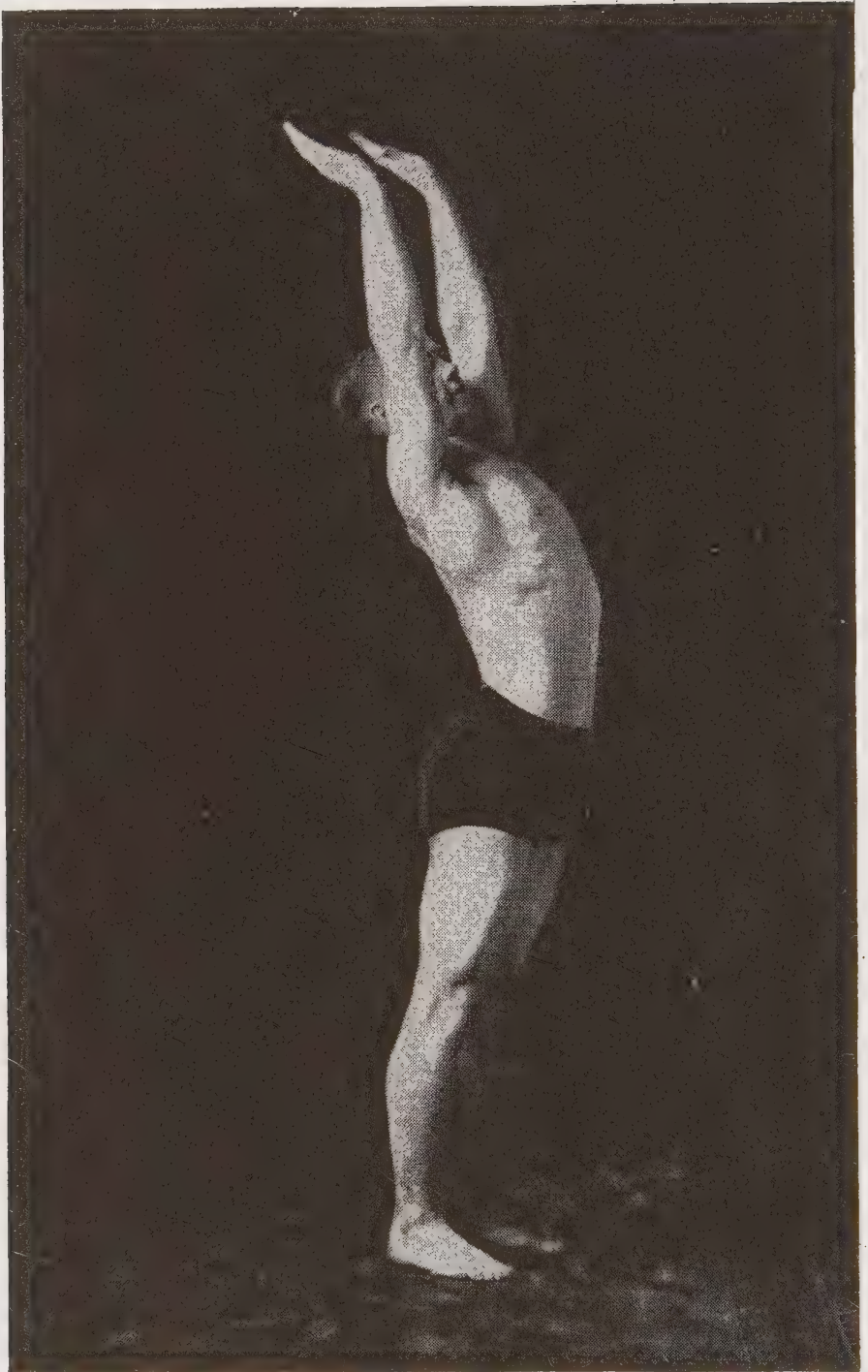


FIGURE 30.

THE HIPS

abdominal muscles and is also good for the back.

Be sure that the body has plenty of fresh, pure air at every exercise period, as well as during the rest of the day.

CHAPTER IX

STRENGTHENING THE BODY SUPPORTS

THE legs are very much like another part of the body—the arms. There is an upper leg just as there is an upper arm, and a lower leg made up of two bones, much like the lower arm. In the leg, though, the bones are longer than those in the arm, and the muscles, too, need to be stronger and tougher so that they may better perform their work of supporting the body. For that is what the legs do—they support the body. Probably very few boys have thought just how much they have to depend upon the legs in the movement of the body, but if a boy did not have

THE BODY SUPPORTS

legs he could not move from place to place, nor do anything which a real, live, active boy likes to do ; he could not skate, nor play ball, nor run and jump and swim.

The bone in the upper leg is called the femur ; it is long and slender, the longest human bone, and over it are fastened some of the strongest muscles in the whole body ; one of these is particularly interesting because it is the longest muscle, also. It is sometimes called the "tailor's muscle" because when a tailor sits cross-legged this muscle is brought out very prominently. It commences on the outer side of the hip, and runs slantingly across the front of the leg where it is fastened on the inside at the knee. A boy when standing on tiptoe can find

PHYSICAL TRAINING FOR BOYS

this muscle in his leg, and may follow a part of its course with his fingers. He will also find a very great difference between the arrangement of the muscles in the legs, and those in the arms. In the latter, the muscles which flex or raise the lower arm are in front, while in the leg they are at the back. This may seem strange just at first, but by flexing one and then the other, a boy will find the explanation in the movement of his arms forward and upward while the foot is raised upward and backward.

The muscles of the lower leg are mostly back of the two bones, where they form a thick cushion of tissue; when a boy has been using them a great deal he can bring them out in firm, hard bunches by standing on tip-

THE BODY SUPPORTS

toe. This is an excellent test, too, of whether they are in good condition and will help him to learn where the muscles lose their fleshy form and become tendons. One of these tendons is longer, thicker, and stronger than any other in the body. It is about six inches long and may be easily seen beneath the skin at the back of the foot where it enters the heel. Here it is like a thick cord, and is easily felt with the hand

Climbing a steep, rough hill, or swimming, will, if not continued to the point of fatigue, make both the upper and lower leg muscles stronger and will give them a beautiful shape of which any boy may be proud. These beautiful lines and great muscular power may be gained by those boys who cannot do

PHYSICAL TRAINING FOR BOYS

these things, if they will put energy and determination to succeed in their practice of the few drills given herewith.

Exercise 18

Support the body on the toes, in the position shown (Fig. 31). Place the palms on the inside of the legs, and resisting with the outer leg muscles try to force the knees apart (Fig. 32). Relax ; resume first position, and repeat until tired. This is beneficial to the muscles along the inside of the leg.

Exercise 19

Crouch in the same position as the previous exercise, except with the knees wide apart and the hands on the outside (Fig. 33). Gradually force the knees together (Fig. 34), making the work diffi-

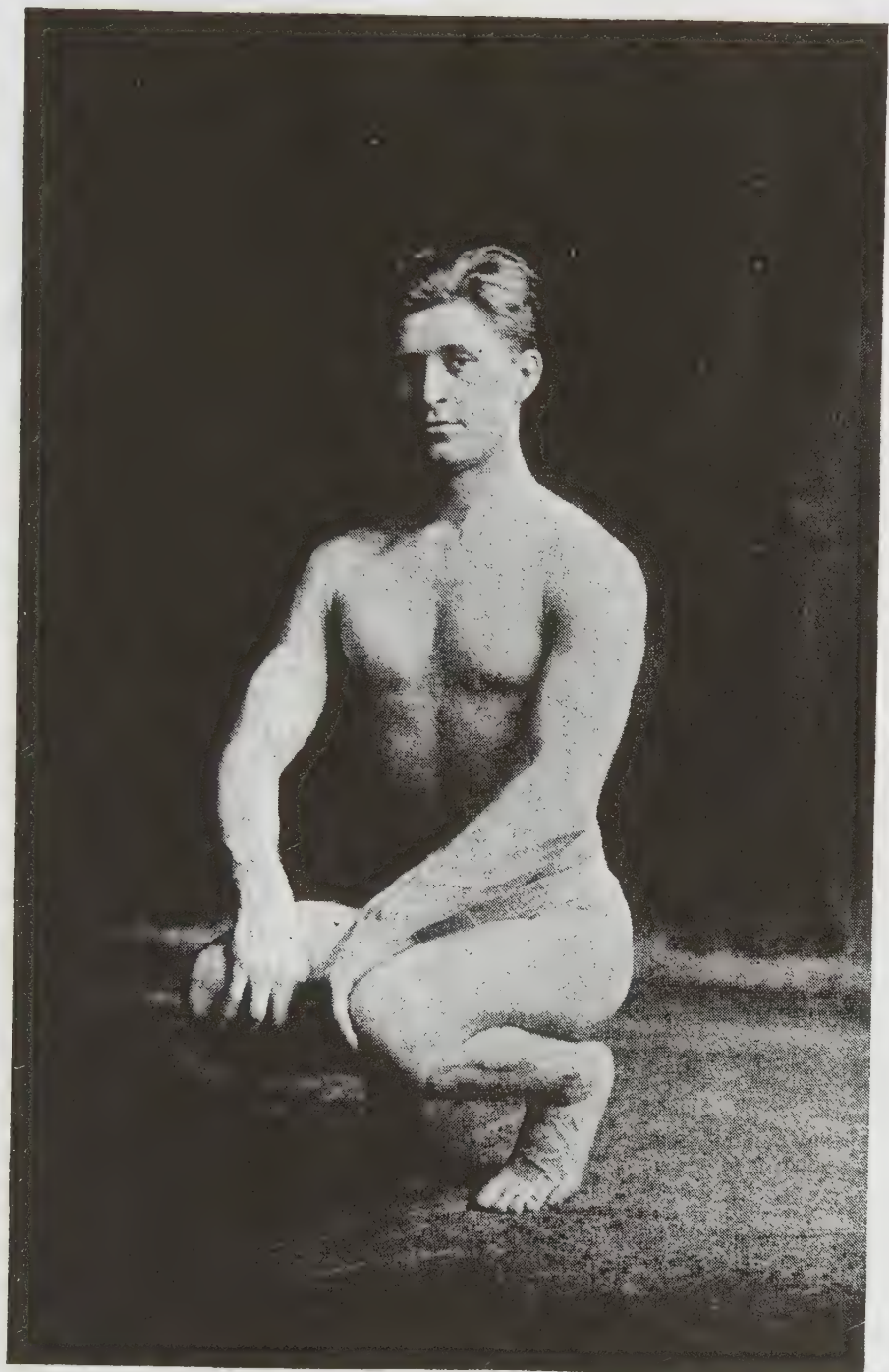


FIGURE 31.

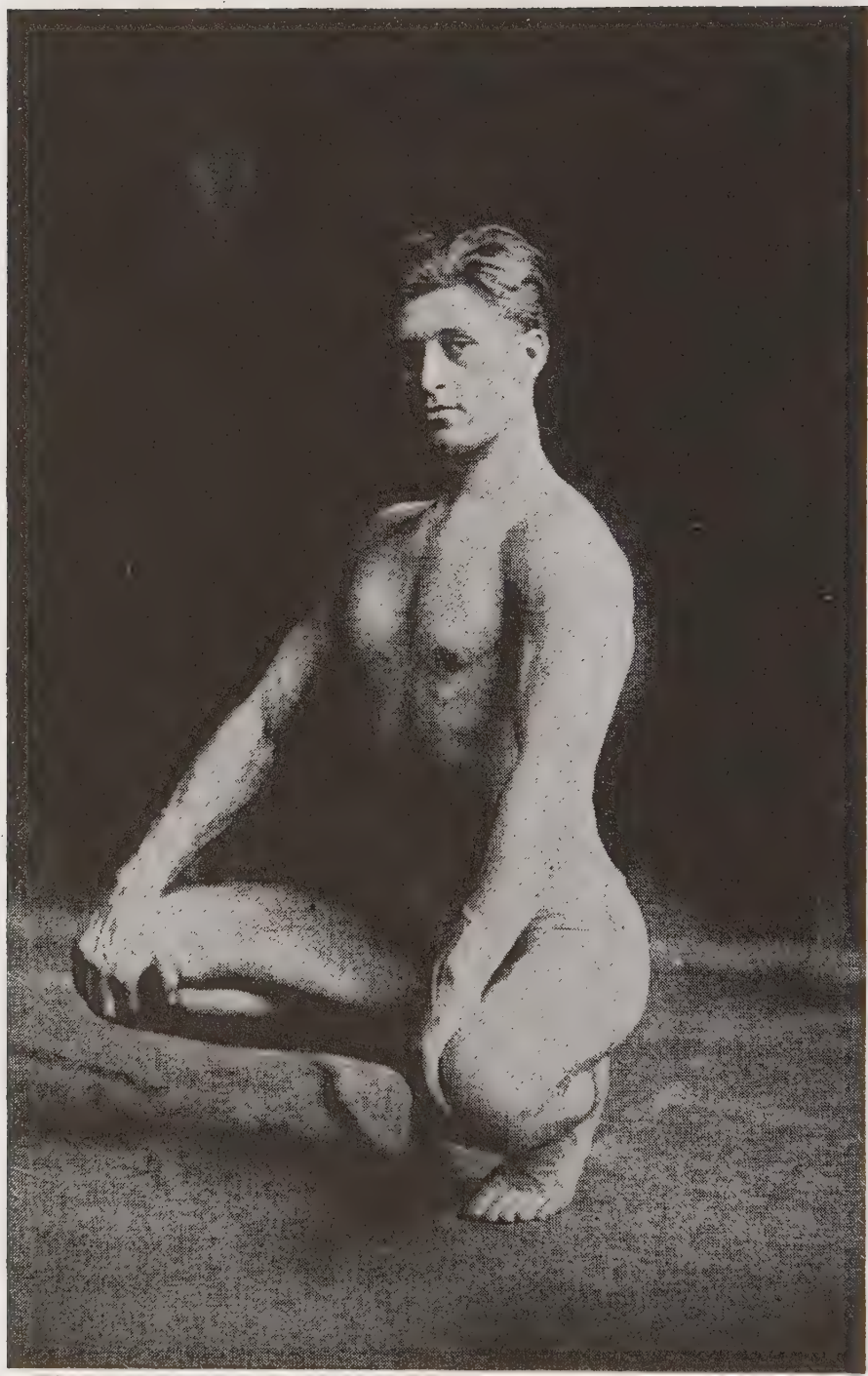




FIGURE 33.

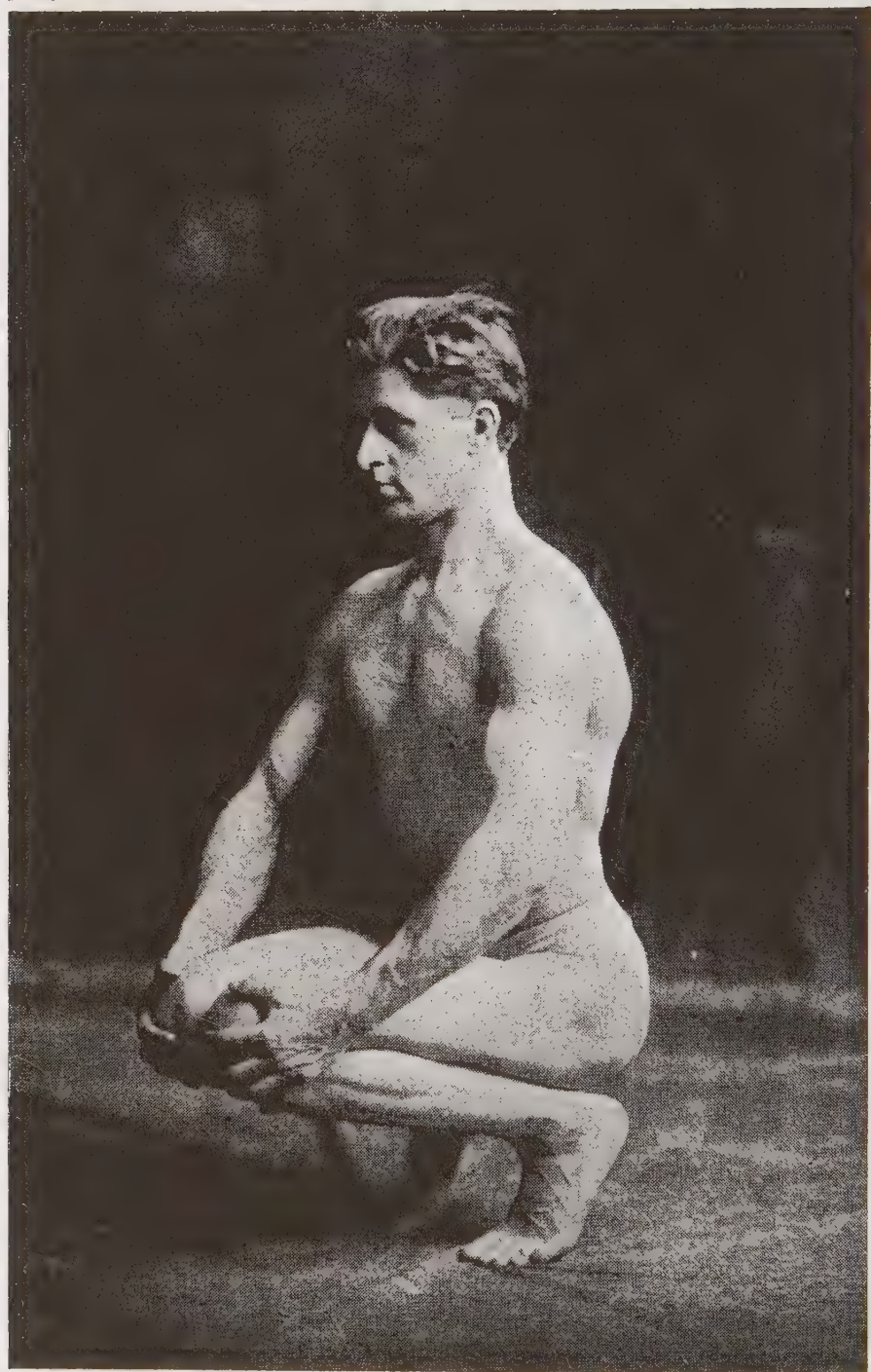


FIGURE 34.

THE BODY SUPPORTS

cult by opposing the muscles of the legs against the strength of the arms. Repeat until tired. This develops the muscles on the outside of the leg.

Exercise 20

Stand erect, and raise the right leg sideways, straight out from the body, until it is on a level with the hip. Hold for a moment and gradually lower. Then perform the same movement with the left leg, while standing on the right. By practising this for a few minutes each day a boy may not only soon become finely developed in his legs, but will also gain great agility of movement.

Exercise 21

This is for the lower legs, and consists of simply raising the body on tip-

PHYSICAL TRAINING FOR BOYS

toe (Fig. 35), and then gradually lowering it. This may be varied by turning the heels either in or out while rising.

When all these drills are followed for only a few minutes each day, they will give a development like that which has been the joy of athletes of all generations since Rome's first body-builders, and will give the Twentieth-Century boy the perfect physique which was the goal of the lads who worked hour after hour in those "gyms" of long ago.

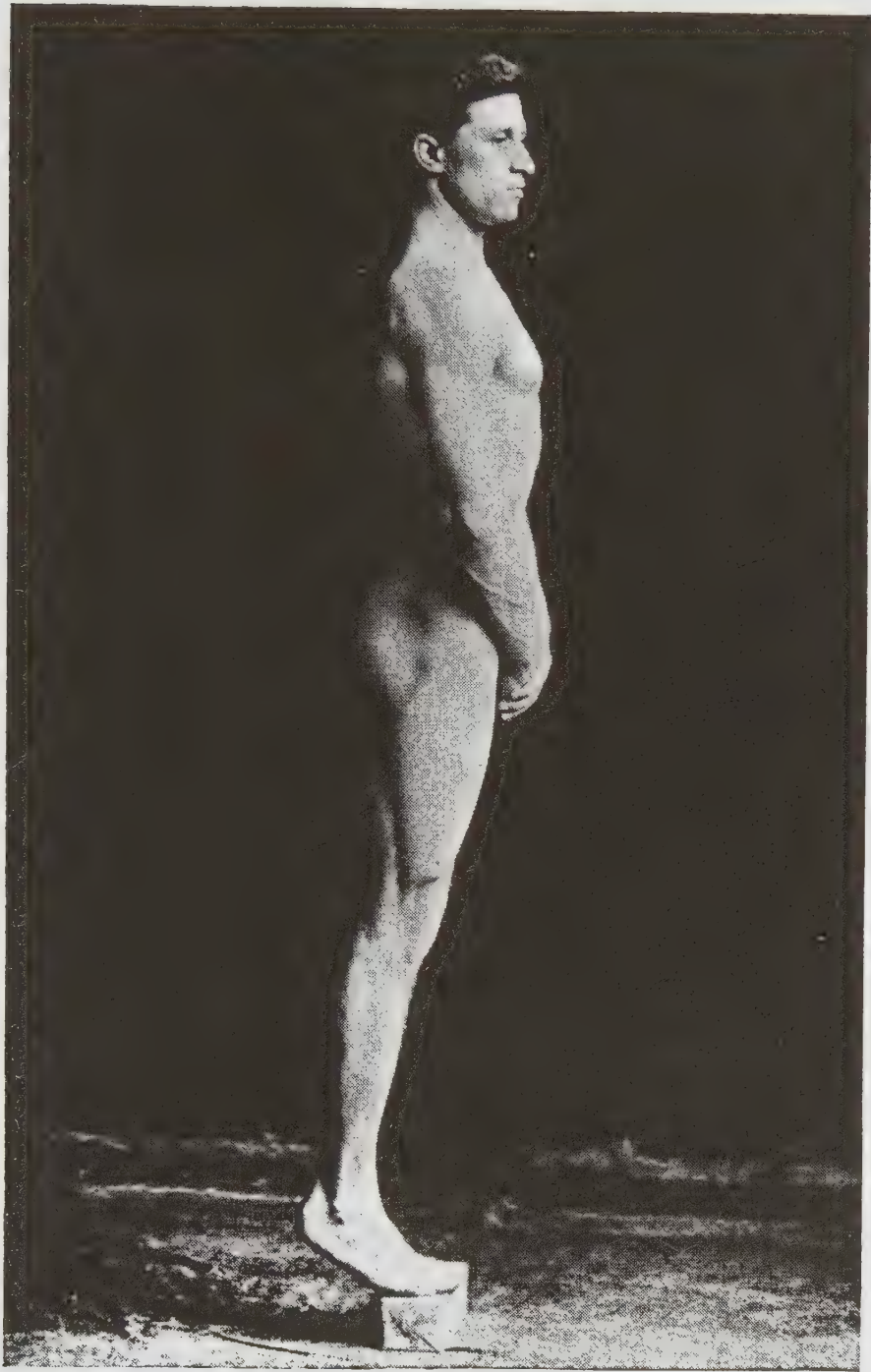


FIGURE 35.

CHAPTER X

THE FEET, AND THEIR CARE

THE general efficiency of a boy's body is greatly influenced by the condition of his feet; when they are cold, the digestive organs cannot work as they should, the mind cannot act quickly, and the whole system suffers. It is just the same when there is anything else wrong with the feet, so the lad who is to have good health will do well to care for them, and pay attention to their needs.

Some boys think it looks manly to wear tight shoes, but they do not know that they are injuring their feet. Tight shoes do hurt the feet very

THE FEET, AND THEIR CARE

much, because they keep the blood from circulating freely, and so the waste matter is not carried away and there is not enough food brought to them to make them strong and healthy. This is the reason why some boys cannot walk very far without becoming tired and making their feet sore. Walking is such a very healthy exercise, too, that it will pay a boy to get his feet into condition so that he can walk for many miles. It was the pride of the youths of Rome to be able to run for long distances without fatigue; and the Indian boys who were in this country when white men first came here could travel through the forests and over rough and stony paths for miles and miles. This was because they had feet which were as

PHYSICAL TRAINING FOR BOYS

strong as the other parts of their bodies.

The boys of Rome went barefooted, and the Indian lads wore soft moccasins made of leather, and without heels. And from their ways of treating the feet, every boy of to-day may learn some valuable things that will help him in strengthening his own feet and ankles. The lesson from the Roman is that he should give the feet plenty of fresh air. Some boys do this by going without shoes, while others can give their feet an air bath before going to bed. Remove the shoes and stockings and gently rub the feet with the hands, kneading the muscles all the time for several minutes. This will rest them after a hard day's work, besides giving them the air they need.

THE FEET, AND THEIR CARE

The moccasins worn by the Indians allowed the foot to keep its natural position. It is a wrong idea to think that the foot needs to be supported by a high leather heel on the shoe; it does not, and only by keeping a natural position may a finely shaped foot be developed. A rubber heel is much better than one of leather, and even this should be very low.

In walking, the body should be relaxed and an easy swinging stride cultivated; this furnishes exercise for the whole body, and as the shoulders are thrown well back, and the head is erect, the lungs will be given the oxygen which they require. The boy who does much walking will not need to perform any special exercise to develop his feet, but if he wishes to have

PHYSICAL TRAINING FOR BOYS

such a drill, the last one given in the preceding chapter will furnish that kind of work. It cannot, though, give the all-round symmetry and power that will be gained by frequent long walks.

CHAPTER XI

SLEEPING, BATHING, AND GROWING

WHEN does your body grow—during the day or at night? If this question were asked in some examination at school, what answer would you give? Perhaps you would make a guess that it was growing all the time until you had become a man. But it is not. It is only at night that the body gains in size, for while a boy is sleeping is the only time that he is not tearing down the cells of his muscles. For this reason every lad, no matter where he lives, should go to bed early. Besides this, if he is in bed before a late hour, he will awaken

PHYSICAL TRAINING FOR BOYS

in the morning full of animation and will feel like doing things.

The bed should be reasonably soft, but not so that the body will sink into and be, as it were, buried by it. A good mattress, or a ticking filled with straw, makes a much better bed than the feather-beds which were used by the people a generation or so ago; such a bed with good springs and plenty of bedding should enable any lad to get the very best out of his night's rest. It is better that the coverings be light-weight so that the body may be kept comfortable without danger of becoming too warm or too cold. Of course every one knows that all the bedding should be kept clean, and well aired. If, when he gets up in the morning, a boy will strip all

SLEEPING, BATHING, AND GROWING

the covers from the bed, placing them on a chair before an open window, he will find that he will sleep much better when he goes to bed.

The best position in sleeping is with the legs extended and the body in the position shown in the picture (Fig. 36). There are other positions, but the boy who really wishes to become a true man will sleep on his side, instead of on the back, for that is a very unhealthy position.

Even though a boy has plenty of sleep and exercise, there is one other thing absolutely essential to his having good health. He must have a clean body. The system is constantly throwing off poisons through the pores of the skin, and unless these pores are cleansed frequently they will become



FIGURE 36.

SLEEPING, BATHING, AND GROWING

clogged so that no more of the waste matter can escape through them ; when this happens the body becomes poisoned, and sickness follows. Now no boy would think of poisoning himself, but if he does not bathe often, that is what he will be doing.

Several years ago a boy who was going away from home to a boarding-school resolved that he was going to take the best possible care of himself so that he might become a winning athlete. The first thing that he did in his training was to take a cold bath, followed by a brisk rubbing with a coarse towel, as soon as he got up in the morning. He began this practice when school started in September and the water was warm, and kept it up all winter, even when it was ice cold. By

PHYSICAL TRAINING FOR BOYS

spring his physical condition was superb; his muscles were firm and tough, and his skin soft and velvety, while all his internal organs were working perfectly because they were free from poisonous substances.

There was nothing magical in what he accomplished; it was the unfailing effect of the morning bath. Every other boy can do just as this one did and may gain just as enduring a body. If he does this, and has all the sleep that he needs, so that the body can repair its worn-out places and build larger and better tissues, he will be doing much toward gaining a form that is flawless, and a mind that is always dependable, fulfilling the standard of Apollo, set so long ago.

CHAPTER XII

BUILDING BY BATHING

THE great athletes, the Marathon runners—all those who developed great physical prowess in ancient times—were the product of frequent bathing. Throughout Greece and the Roman Empire public baths were established by those in power, and these were open without charge to rich and poor alike. All the people frequented these places, sometimes a single bather visiting a bath several times during a day. This was especially true of the athletes who participated in the Olympic, Pythian, and other great

PHYSICAL TRAINING FOR BOYS

games of physical skill They followed this practice so that the body might easily throw off poisons through the skin. More than this, they had learned that the body breathes, not only through the lungs, but through the skin, and that it was essential that the pores be kept open to absorb the oxygen as they should.

If such habits of cleanliness were found to be essential by the most able athletes hundreds of years ago, certainly the boys of this Twentieth Century cannot afford to neglect such an important part in the care of their bodies. It does not take many minutes for a good bath, and no matter whether it be a quick sponge, a plunge into a stream or lake, or taken as a shower with modern conveniences at hand, it

BUILDING BY BATHING

is certain to leave the body refreshed and every sense quickened.

The bath water should preferably be either lukewarm or cold ; never, except as a remedial agency, should it be hot. If a shower bath is taken, it is usually better to begin with warmer water, gradually increasing to cold. The same method applies to sponge baths as well. It not only purifies the skin but also, when followed by a brisk rub with a medium-coarse towel, will leave the entire body in a glow that means a healthy skin, and firm muscular tissues.

There are few healthy boys who do not enjoy swimming in a clear, cool stream, and later lying on the banks, letting the sun shine on their bodies. This is natural because it is fulfilling the demands of Nature for the building

PHYSICAL TRAINING FOR BOYS

of the best physique : sunlight and air. When a boy has cleaned out the pores of his skin by swimming in a clean stream of water, they are every one open and ready to absorb oxygen to their greatest capacity. Such a supply is a fundamental of a skin that is to be kept free from disease.

However, air is not all that the skin needs ; the sun shining down on the bare body imparts qualities that mean stronger, firmer muscles and a softer and more elastic skin. We all know that if plants of any kind are shut away from sunlight, they lose color and do not develop as they should. The same thing is true of a boy who keeps his body shut away from the sunshine all the time. For this reason the lad who goes swimming may well let the

BUILDING BY BATHING

sun shine upon his naked body, drying and strengthening it. Of course these sun and air baths should last for only a few minutes—long enough to dry the skin of the swimmer—for the sun's power may do damage as well as good to the body, when the exposure is too long. The men whose names have been handed down to us from among the early athletes doubtless owed much of their wonderful endurance and skill to their manner of dressing and their frequent sun and air baths.

A great many young athletes may not have an opportunity for out-of-door swims and air and sun baths, but they may have a substitute. The youthful body-builder may gain almost as much by taking his sun bath in his own room, where the sunlight may strike

PHYSICAL TRAINING FOR BOYS

his body through an open window. This will also give him an air bath, just as if he were out in the open.

These ways of bathing are not the only ones a boy may use—he may have a friction bath also. This is simply giving the skin a brisk rubbing with a coarse towel, and has the advantage of being available almost anywhere. It cleans the waste matter from the skin, leaving the pores open, and at the same time stimulates circulation so that new blood rushes through the muscles and skin, supplying them with the food to create new tissues.

Although bathing is a simple thing so far as rules are concerned, there are two of these which should always be followed. First, never take a bath, and especially a water bath, just after a

BUILDING BY BATHING

hearty meal. Second, do not bathe immediately after taking any violent exercise. To disobey either of these is to lose all the benefit from the bath itself, and also may result seriously or even fatally. Do not do it!

CHAPTER XIII

YOUR WEIGHT AND MEASUREMENTS

AM I tall enough? Do I weigh as much as I should, or am I too heavy? These, and similar questions are asked time and again by every boy who is interested in his own body. And they are very natural questions too; a boy should, if he is healthy, have such an interest in the development of his muscles that he will want to know whether he is superior or inferior to his chums, and to other boys in general.

But though this interest is highly commendable, it is very nearly impos-

WEIGHT AND MEASUREMENTS

sible to give an answer to any questions about a boy's weights and measurements, as compared with other boys, for no table covering these points has ever been prepared, and there is no standard. Prof. L. Norman Zarfos, an authority on physical training, says this regarding the conditions which enter into the consideration of the size and weight which a boy may attain. "The bony framework has much to do with what the size of the muscles should be, and that is often determined by hereditary conditions as well as by environment. I also believe that muscles have a direct influence on the bony framework, and that bone increases in size and weight according to the kind of exercise the muscles attached receive."

PHYSICAL TRAINING FOR BOYS

Accepting this explanation, it is clear that boys of the same age may differ greatly in their measurements because of their difference in form. A short, heavily boned lad may have larger, thicker legs than the one who is taller. Again, a boy with slender bones may be short and light in weight, or tall and heavily muscled.

But though there are no set standards for a boy's muscular development, what boys have accomplished in different sports sets a goal for young athletes of different weights and ages. This is particularly true of the achievements of different boys as swimmers. There are few lads that know how to swim who do not enjoy being in the water. And this is as it should be, for there is no sport that a boy can enter and have

WEIGHT AND MEASUREMENTS

more real enjoyment and true physical benefit than that of a swimmer. It may be that this explains the splendid records which have been made by various boys from time to time. One of these events in a recent summer shows what a boy can accomplish in a swimming contest. Eddie Snyder, a twelve-year-old, covered the fifteen miles between Coney Island and Brooklyn Bridge in six hours and forty-five minutes, or at the rate of a mile in twenty-seven minutes. Another, a fifteen-year-old lad, Gilbert Tomlinson secured the half-mile swimming championship of America, while Leo Handy, a year older, earned the championship of New England.

The following records, which may be taken as a standard by any boy,

PHYSICAL TRAINING FOR BOYS

were made in an Elementary Schools' Swimming Contest in New York City ·

<i>Weight</i> (pounds)	<i>Distance</i> (yards)	<i>Time</i>
85	20	11 4-5 s
100	40	25 3-5 s
115	60	38 2-5 s

Cross country, Marathon, and short-distance running are all preferred above other sports by many boys. Others practise running because they can more easily win honors in this line, or because they believe it to be beneficial to them in developing power and agility. It is true, indeed, that running is a splendid sport and that it may increase the lung capacity, and add to the enduring powers of the entire system. Such benefits will result from cross-country running only, however. Marathon work, instead of giving this re-

sult, is apt to do the opposite for a growing boy. One of the greatest physical training authorities living has gone so far as to condemn Marathon running for boys even as old as seventeen and eighteen. However, the boy who indulges in running contests with those of his own size and ability will really benefit by the practice, and it may be safely followed unless there is some organic cause to hinder. He should make it a habit to start gradually, increasing in distance and speed as he gains in strength and endurance.

After a time, any boy, if he will care for his body, may come close to, if not equal to, the following records made by the boys who won in an Elementary Schools' Indoor Championship Contest in New York :

PHYSICAL TRAINING FOR BOYS

<i>Weight</i> (pounds)	<i>Distance</i> (yards)	<i>Time</i>
85	50	6 3-5 s
100	60	7 3-5 s
115	70	8 2-5 s

Well-known weight-lifters, and authorities on weight-lifting, differ very little in their opinions about the best time for a boy to begin practising weight-lifting. One of these, a man who has associated with practically all the "strong men" of to-day, says that no boy under fifteen should undertake this phase of athletic training. An other authority, equally well known, asserts that eighteen or nineteen is young enough to begin handling heavy weights. It is certain, however, that no lad should try such work until he has given his muscular system a thorough training with lighter exercises; on such a foundation he may usually

WEIGHT AND MEASUREMENTS

safely commence weight-lifting on a small scale.

Wrestling, for even young boys, is a splendid sport and exercise. Almost all those who have succeeded in developing really splendid bodies have wrestled their way to their goal. The boys whose photographs appear in this book are all fond of this great amusement, which has been handed down to us from earliest athletes, and which is to-day practised in every civilized land. One special advantage of wrestling is the fact that absolutely no apparatus is needed for a friendly bout. Just active muscles are all that is required. Even these are not necessary for the beginner but they are certain to result with only a few weeks of practice.

Boxing, baseball, and many other

PHYSICAL TRAINING FOR BOYS

sports are good for the boy who wants exercise for pleasure as well as benefit to his muscles. Of course, none of these or any other sport should be continued until the body is exhausted, for then no good, but real harm will be done.

It is far better, too, that in all contests, and tests of skill and strength, the participants be equally matched in strength and ability. This not only makes the contest itself more interesting, but each contestant will actually gain in such an encounter.

Throughout all a boy's training these muscle-developers count, but there is one thing more which the lad who is to gain the highest goal of physical success must have : a clean, pure mind. Without this he may never equal what

WEIGHT AND MEASUREMENTS

he might with a mind filled with noble, uplifting thoughts. Contests in swimming, wrestling, or any other sport may be kept free from dirty stories, foul language—everything evil. It is not difficult to keep all these bad influences away, and certainly the lad who really wants to excel will endeavor to do this for the sake of his own physical perfection and skill.

CHAPTER XIV :

WORK AND PLAY

WORK is healthy, but it fails to accomplish much toward developing a symmetrical body. It is true that when the arm muscles are used day after day in performing one kind of work, they will become strong. But the rest of the muscles have not been benefited, and so the whole body is out of balance.

There are a great many persons who have just such a form, and though they may be strong enough to do some things, they will readily tire if given anything which brings their unused

muscles into play. It is just as if a musician were to play certain pieces day after day, without changing; or like a student in school who recites the same lessons all the time. There is no development nor improvement.

But there is a means by which a boy may get all the good that he would receive if he were to do work that used all his muscles at one time. This is in play. It will liven up his whole system, and will bring almost all of his muscles into use. The lad who plays tennis is giving his back and legs, and his arms and chest, all, the very kind of exercise that they need, and at the same time has the joy of enlivened action. And it is the same in all other games which are played in the open.

PHYSICAL TRAINING FOR BOYS

Of course, even games lose their value if continued too long, but when interspersed between working times, they supply the things which make health. This is especially true if the spirit of rivalry enters into the game ; the player forgets for the time everything but the contest, and the blood rushes through the arteries, purified by the air in the lungs ; the brain gets the training of quick action, and the muscles are put to the test of performing their work with all their strength, without hesitation, when called upon.

And so, for the boy body-builders of the present, there is a wonderful opportunity in the ordinary games which they play with their school friends and companions. These are the places

WORK AND PLAY

which will show them where they are weak and in what ways they are strong; with this knowledge, gained from actual use of their muscles, they may know which parts need to be developed by the special exercises which have been given in this little book

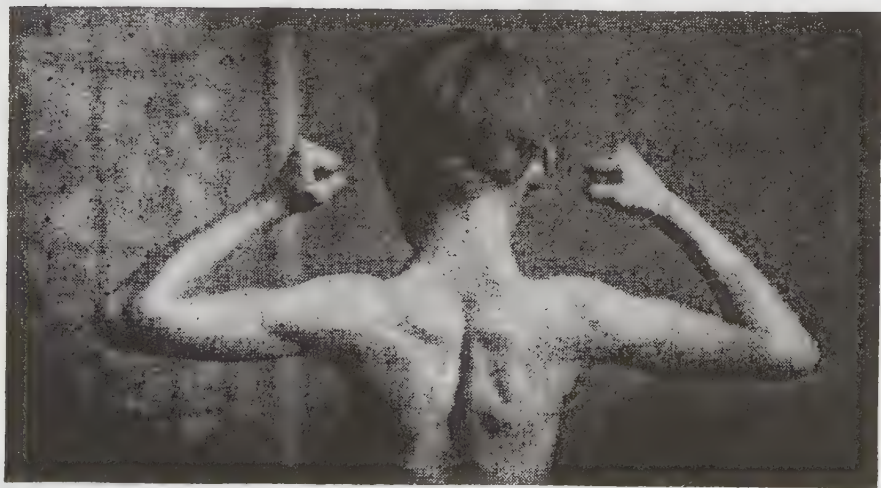
And coupling work and play, with the practice of these drills, they may far outstrip the athletes of the past, and set a standard for the future generations—a standard that will mean purity of thought and action as well as faultless physical lines. This is the Opportunity of every boy of to-day.

That a boy may begin while he is very young to make his body strong has been proven by Master Paul Maass, of New York, whose ambition to be-

PHYSICAL TRAINING FOR BOYS

come a champion in athletics has inspired him to practise many different exercises and drills until his muscles have become like steel. When Master Paul was only eleven and a half years old he could expand his chest three inches ; his height was four feet, eight inches, and he weighed seventy-three pounds.

Paul has been very systematic in his training. He gets up in the morning at six o'clock, and immediately goes through his drills, the first of which is the performance of twenty different exercises, twenty times each ; this is followed by a swing on his trapeze, and a few moments of work with a dumb-bell. He next does a few stunts with Indian clubs, after which he has his bath, and then he is ready for



PAUL MAASS.

PHYSICAL TRAINING FOR BOYS

his breakfast and school work ; his brain is clear and he is able to think and act quickly. Among his classmates he ranks well as a scholar, and is as energetic in his study of books as he is in the exercise of his muscles. On Saturdays and holidays he frequently goes on long walks with his father, and these and his exercise morning and night keep him in the best of condition and are developing him into a splendid specimen of physical development.

Every boy may well study the broad, beautiful chest and the well-developed back and arm muscles as they are shown in his pictures ; and then, working on the same plan that Paul has done may accomplish as much with his own body. Paul says, "In less

WORK AND PLAY

than six months one will notice a great change in his strength." And this is encouragement indeed to all body-builders, both young and old.

The boys of from twelve to fifteen have a high standard set for them by Robert Snyder, Jr., a young athlete whose home is in the Blue Ridge section of Maryland. When these pictures were taken Robert was only fourteen years old, and had been practising to develop his muscles for only two years. But during this short time he had become expert in performing on almost all kinds of gymnastic apparatus, and had gained skill in both boxing and wrestling. Along in the first of his training he began practising lifting light weights and within a few months could lift two hundred pounds above his head with

PHYSICAL TRAINING FOR BOYS

both hands, this being seventy-three pounds more than his own weight when stripped.

The success which Robert has had in developing his body is probably due to the fact that he has studied its needs, and has given it the best of care. He hopes to become a professional "strong man," but realizing that a trained brain is as necessary as strong muscles, he is putting energy and determination into his high school work, where he has gained honors in composition and is a faithful student.

But, though he has attracted the attention of many great athletes, Robert is not bragging of his attainments; instead he only strives the harder to gain greater skill. And he will succeed for he says, "I positively do not dissipate



TWEED STAFFORD.

PHYSICAL TRAINING FOR BOYS

will make it his own. He expresses it thus : " I believe one should care for the body as he would for a fine piece of machinery, for such it is." Isn't this a grand idea, and doesn't it mean a great deal to think of the body as a wonderful machine with which you are intrusted, to keep in the best of condition? And more wonderful still is the fact that every boy can do this very thing : keep his own body in perfect running order.

Besides having well-trained muscles Stafford has a mind which has been developed by education. He is a modest, retiring, gentlemanly young fellow, and is as pure in speech and action as he is perfect in physique. And why should he not be? These are all characteristics which help to keep the body clean and strong.

WORK AND PLAY

He is especially fond of boxing and wrestling, and these sports, coupled with constant practice and study of special exercises, have been the means by which he acquired the superb condition which he has. Many physicians have stated that he is perfectly proportioned and so is worthy to be taken as a model by every lad who wishes to make the most of his own body.

Living close to Nature, swimming, camping, and having a good time generally has had a large part in the success of Wilbur B. Zeigler, a Pacific Coast boy. He has had camping trips, lasting two or three months at a time, ever since he was five ; sometimes he has been all alone in the camp among the redwoods for days together.

But whether alone or with friends he

PHYSICAL TRAINING FOR BOYS

follows certain methods in caring for his body. These include canoeing, swimming in the mountain streams, going without a hat, and with but little clothing; and sometimes special exercises are included. Usually, though, he omits his regular course of drills when in camp. However, if he does this while living in the open he is sure to begin them again upon returning to his home.

In speaking of his training Wilbur gives some hints that may be followed profitably by other boys. He says, " My hour for exercise is just after school, taking up on successive days different sets of muscles. For instance, on the first day, it's the muscles of my arms and shoulders; on the next, the muscles of my back; on the next, those of



EDWIN RUSSELL.

PHYSICAL TRAINING FOR BOYS

Young Russell spends his days working, and in the evening does his exercising, using various kinds of apparatus. He uses heavy weights every day, and says that weight-lifting is largely responsible for his splendid physique. His work on the lighter apparatus in the gymnasium where he spends his practice-hours has given him agility. Hence he has attained a high standard of general physical and mental efficiency.

Edwin is fifteen, and already possesses considerable skill in weight-lifting, wrestling, and other sports, while his muscles show remarkable development.

Other lads who have only a short time each day in which to train their bodies may take courage from young

WORK AND PLAY

Russell's success, which has been attained by making use of spare time.

Some boys do not need to be very old in order to win honors in feats requiring both strength and skill.

This is proven by ten-year-old Walter Laughton, who holds the Juvenile Wrestling Championship of Saskatchewan, and who is, probably, the most able boy athlete in all Canada, as well.

This young Canadian has his own little gymnasium fitted up in his father's barn, and he spends many hours each day working with dumbbells and heavy weights, and practising his wrestling holds.

Young Laughton has appeared frequently in public, demonstrating his ability to handle heavy weights, as

PHYSICAL TRAINING FOR BOYS

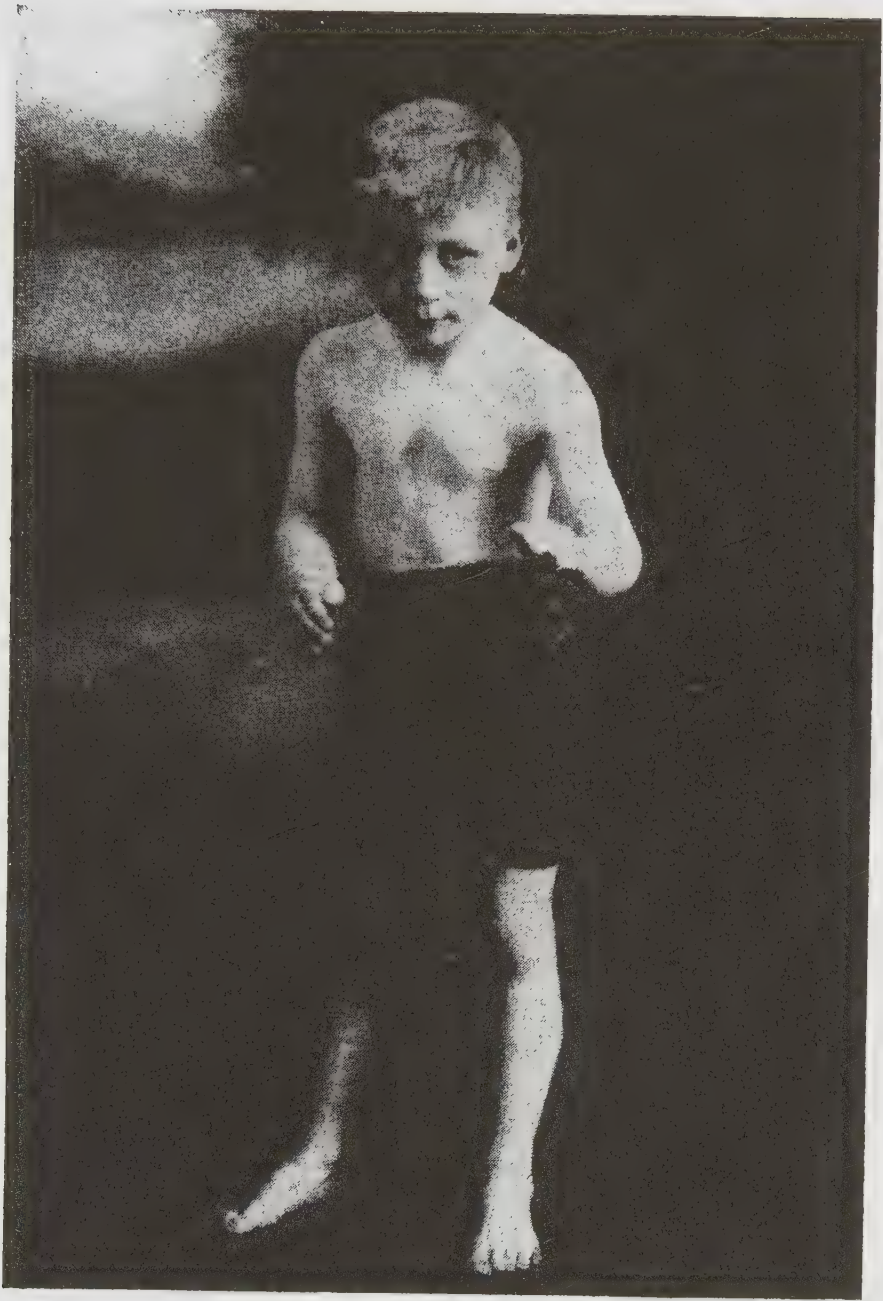
well as participating in frequent wrestling bouts.

Walter can run and jump, as well as successfully compete in weight-lifting and wrestling, as is shown by numerous prizes which he has won in school, and other athletic events.

Boy body-builders may find much of interest in this Northern lad's measurements, which show his splendid development.

Height	-	-	-	-	-	-	4 ft.	4	in.
Calf	-	-	-	-	-	-	-	10	
Neck	-	-	-	-	-	-	-	11	
Biceps	-	-	-	-	-	-	-	8	'
Thighs	-	-	-	-	-	-	-	15	
Waist	-	-	-	-	-	-	-	22½	"
Chest (expanded)	-	-	-	-	-	-	-	27	"
(normal)	-	-	-	-	-	-	-	25	"

The lad of the present does not have the many statues of Apollo, which the first boy athletes had, as inspiration in



WALTER LAUGHTON.

PHYSICAL TRAINING FOR BOYS

their efforts to build beautiful bodies. But fortunately there have been men who have held the same high ideals of physical perfection, and who are living models for every boy. Of these there is none more representative than Mr. John Rowett, who has spent years in training and developing his muscles until he stands to-day a Twentieth-Century Apollo, flawless in every line of his body, and at the same time physically and mentally alert and capable. (*See Frontispiece.*)

Mr. Rowett is an American and has spent his life in the Great Lake section where he has taken advantage of the many opportunities for outdoor sports, and has in that way brought every part of his body into the best of condition. He is an accomplished swimmer, an

WORK AND PLAY

expert boxer, and has for a long time been world champion in Cornish Wrestling. In speaking of this sport Mr. Rowett says, "It builds up muscle; it helps the brain and eye; to be a wrestler you must be quick to see and act; it is a good defense in case of attack; to me it is the greatest of all games when it is on the square." And these are the characteristics which Mr. Rowett has acquired in goodly measure. More than this, he is a modest gentleman, and has a spotless character. He weighs, stripped, 185 pounds, and is about five feet, nine inches in height.

Besides his athletic activities Mr. Rowett has taken an active part in civic matters and has served as sheriff and game warden in some of the

PHYSICAL TRAINING FOR BOYS

roughest districts in the mining settlements of Michigan.

Through it all he has maintained such high ideals of manhood, physically, mentally, and morally, that every boy may be proud to pattern his own life after this able man of the great North Woods.

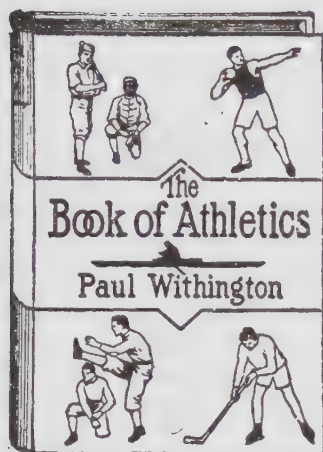
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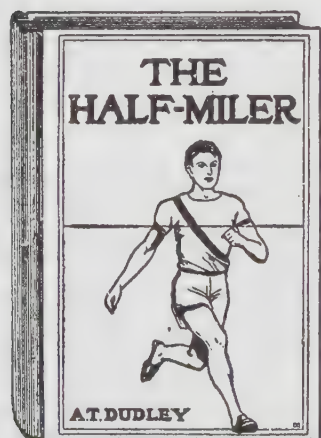
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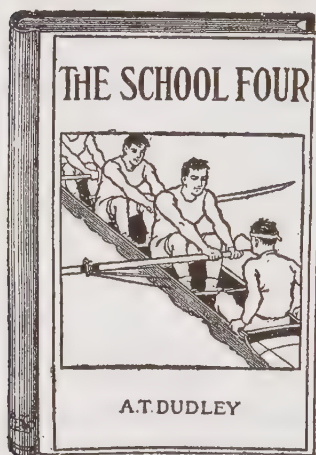
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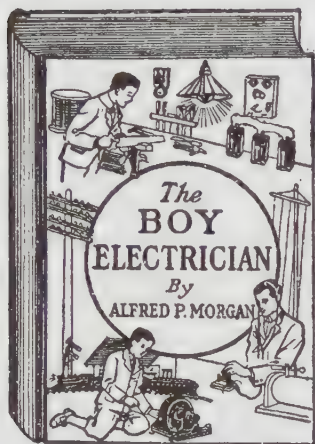
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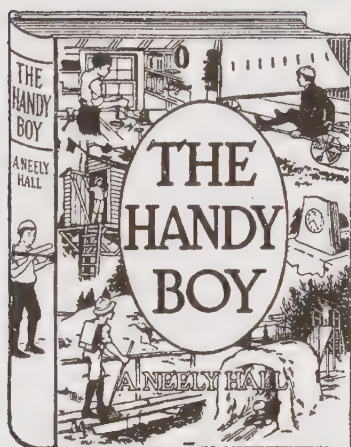
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